# Print Version

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## Summary

| | |
|---|---|
| Reference | 14/00857/NSIP |
| Alternative Reference | Not Available |
| Application Received | Wed 25 Jun 2014 |
| Application Validated | Tue 11 Nov 2014 |
| Address | Swanscombe Peninsular |
| Proposal | General Paramount enquiries |
| Status | Unknown |
| Decision | Disposed of |
| Decision Issued Date | Tue 31 Jan 2017 |
| Appeal Status | Not Available |
| Appeal Decision | Not Available |

## Further Information

| | |
|---|---|
| Application Type | Nationally Significant Infrastructure Pr |
| Decision | Disposed of |
| Actual Decision Level | Not Available |
| Expected Decision Level | Not Available |
| Case Officer | Sonia Bunn |
| Parish | Swanscombe & Greenhithe T.C. OLD 2019 |
| Ward | Swanscombe OLD |
| District Reference | Not Available |
| Applicant Name | Not Available |
| Applicant Address | Not Available |

| | |
|---|---|
| Environmental Assessment Requested | No |

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# Important Dates

| | |
|---|---|
| Application Received Date | Wed 25 Jun 2014 |
| Application Validated Date | Tue 11 Nov 2014 |
| Expiry Date | Not Available |
| Actual Committee Date | Not Available |
| Latest Neighbour Consultation Date | Not Available |
| Neighbour Consultation Expiry Date | Not Available |
| Standard Consultation Date | Not Available |
| Standard Consultation Expiry Date | Not Available |
| Last Advertised In Press Date | Not Available |
| Latest Advertisement Expiry Date | Not Available |
| Last Site Notice Posted Date | Not Available |
| Latest Site Notice Expiry Date | Not Available |
| Internal Target Date | Not Available |

| | |
|---|---|
| Agreed Expiry Date | Not Available |
| Decision Issued Date | Tue 31 Jan 2017 |
| Permission Expiry Date | Mon 31 Jan 2022 |
| Decision Printed Date | Tue 31 Jan 2017 |
| Environmental Impact Assessment Received | Not Available |
| Determination Deadline | Not Available |
| Temporary Permission Expiry Date | Not Available |

## Constraints

| Name | Constraint Type | Status |
|---|---|---|
| Smoke Control Order No. 19 | Smoke Control Area | Confirmed |
| Southern Water - Waste Water | Southern Water | Confirmed |
| Landfill Sites Consultation 250M | Landfill Sites Consultation 250m | Confirmed |
| Radon Area 1% | Radon Areas | Confirmed |
| Swanscombe And Greenhithe Civil Parish | Property within a Parish | Confirmed |
| Multiple | Areas of Archaeological Potential | Not Available |
| Not Green Belt | Greenbelt | Confirmed |
| General Flood Plain | Floodland | Historic |
| Footpath DS12 | Public Rights of Way | Confirmed |

## Related Information

There are 8 documents associated with this application.

There are 0 cases associated with this application.

There is 1 property associated with this application.

# London Paramount Entertainment Resort

## Environmental Impact Assessment
## Scoping Report

London Resort Company Holdings

**November 2014**

November 2014

# London Paramount Entertainment Resort

## Environmental Impact Assessment Scoping Report

## London Resort Company Holdings

**Prepared for**
London Resort Company Holdings
17 Albemarle Street
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**Prepared by**
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# Contents


| | CHAPTER | PAGE |
|---|---|---|
| | | |
| | **LIST OF ABBREVIATIONS** | **5** |
| | | |
| **1.** | **INTRODUCTION** | **9** |
| | | |
| **2.** | **REGULATORY AND POLICY CONTEXT** | **19** |
| | | |
| **3.** | **PROJECT DESCRIPTION** | **27** |
| | | |
| **4.** | **PROPOSED SCOPE AND STRUCTURE OF THE ENVIRONMENTAL STATEMENT** | **39** |
| | | |
| **5.** | **LANDSCAPE AND VISUAL EFFECTS** *including lighting / nocturnal effects* | **47** |
| | | |
| **6.** | **ECOLOGY** | **75** |
| | | |
| **7.** | **WATER RESOURCE MANAGEMENT** | **97** |
| | | |
| **8.** | **SOILS AND GROUND CONDITIONS** | **105** |
| | | |
| **9.** | **TRANSPORT AND ACCESS** | **113** |
| | | |
| **10.** | **AIR QUALITY** | **125** |
| | | |
| **11.** | **NOISE AND VIBRATION** | **131** |
| | | |
| **12.** | **CULTURAL HERITAGE** | **145** |
| | | |
| **13.** | **LAND USE AND SOCIO-ECONOMIC EFFECTS** | **163** |
| | | |
| **14.** | **WASTE** | **177** |
| | | |
| **15.** | **GLOSSARY** | **181** |
| | | |
| | **APPENDICES** | |
| A. | English Heritage Pre-application advice response letter | |
| B. | Kent County Council EIA Screening response letter | |
| C. | EIA Transboundary screening matrix | |
| | | |
| | **FIGURES** | |
| 1.1 | Site location plan - regional | |
| 1.2 | Site location plan – area | |
| 1.3 | Site location plan – local | |
| 1.4 | Indicative DCO boundary – aerial | |
| 1.5 | Indicative DCO boundary - plan | |

| | | |
|---|---|---|
| 1.6 | Indicative principle land uses plan | |
| 2.1 | Planning designations plan | |
| 3.1 | Site selection plan | |
| 3.2 | Indicative development phasing plan | |
| 5.1 | LVIA study area and viewpoints plan | |
| 5.2 | Environmental designations plan | |
| 6.1 | Ecology study area plan | |
| 7.1 | Flood zone extents (figure provided within chapter) | |
| 9.1 | Transport links plan – local | |
| 9.2 | Transport links plan – wider context | |
| 10.1 | Indicative location of proposed site in relation to AQMAs and SSSIs (figure provided within chapter) | |
| 12.1 | Cultural heritage study area | |
| 13.1 | Rights of way plan | |
| | | |
| | **TABLES** | |
| 1.1 | EIA project team | |
| 3.1 | Areas of search and potential sites | |
| 4.1 | Parties consulted during the preparation of the EIA scoping report | |
| 4.2 | Determining receptor sensitivity | |
| 4.3 | Determining the magnitude of impact | |
| 4.4 | Determining the significance of effect | |
| 4.5 | Proposed structure of environmental statement | |
| 4.6 | Supporting planning and environmental documents for the DCO application | |
| 5.1 | Landscape sensitivity criteria | |
| 5.2 | Landscape quality criteria | |
| 5.3 | Potential assessment viewpoints | |
| 5.4 | Thresholds of significance for landscape effects | |
| 5.5 | Thresholds of significance for visual effects | |
| 5.6 | Potential landscape effects, mitigation measures and residual effects | |
| 6.1 | Ecological survey schedule | |
| 6.2 | Ecology resource evaluation criteria | |
| 6.3 | Potential ecological effects, mitigation measures and residual effects | |
| 11.1 | Thresholds of significance effects at dwellings | |
| 11.2 | Construction noise significance | |
| 11.3 | Magnitude of short-term noise impacts from traffic noise | |
| 11.4 | Guidance on effects of vibration levels on humans | |
| 11.5 | Transient vibration guide values for cosmetic damage | |
| 11.6 | BS4142 likelihood of complaints | |
| 11.7 | Magnitude of long-term noise impacts from traffic noise | |
| 11.8 | Prediction methodologies and significance criteria | |
| 12.1 | Sensitivity of archaeology and cultural heritage receptors | |
| 12.2 | Assessment criteria for determining magnitude of impact | |
| 12.3 | System for assessing the significance of effect on heritage assets | |
| 13.1 | Existing tourism studies | |
| 13.2 | Further source documents | |
| 13.3 | Socio-economic effects of transport – source documents | |
| 13.4 | Assessment of significance magnitude | |

| | | |
|---|---|---|
| 13.5 | Socio-economic effects – significance matrix | |
| 13.6 | Overall significance | |
| 13.7 | Potential transboundary effects | |


# List of abbreviations

| | |
|---|---|
| APIS | Air Pollution Information System |
| AOD | Above Ordnance Datum |
| AQMA | Air Quality Management |
| BAP | Biodiversity Action Plan |
| BC | Borough Council |
| BoCC | Birds of Conservation Concern |
| BS | British Standards |
| C&D | Construction and Demolition |
| CEMP | Construction and Environmental Management Plan |
| CIEEM | Chartered Institute of Ecology and Environmental Management |
| CKD | Cement Kiln Dust |
| CoPA | Control of Pollution Act |
| CTRL | Channel Tunnel Rail Link |
| CRoW | Countryside and Rights of Way |
| dB | Decibels |
| DCLG | Department for Communities and Local Government |
| DCO | Development Consent Order |
| DfT | Department for Transport |
| DMRB | Design Manual for Roads and Bridges |
| EcIA | Ecological Impact Assessment |
| ECOW | Ecological Clerk of Works |
| EDC | Ebbsfleet Development Corporation |
| EEA | European Economic Area |
| EIA | Environmental Impact Assessment |
| ELC | European Landscape Convention |
| EMP | Ecological Management Plan |
| EMMP | Ecological Management and Monitoring Plan |
| ES | Environmental Statement |
| FRA | Flood Risk Assessment |
| GLVIA | Guidelines for Landscape and Visual Impact Assessment |
| GVA | Gross Value Added |
| HLC | Historic Landscape Characterisation |
| HRA | Habitats Regulations Assessment |
| IAQM | Institute of Air Quality Management |
| IEMA | Institute of Environmental Management and Assessment |

| | |
|---|---|
| KCC | Kent County Council |
| KRDB | Kent Red Data Book |
| LAeq | A-weighted category for the equivalent continuous sound level in an area |
| LAQM | Local Air Quality Management |
| LCA | Landscape Character Assessment |
| LCAs | Landscape Character Area |
| LCTs | Landscape Character Types |
| LNR | Local Nature Reserve |
| LRCH | London Resort Company Holdings |
| LVIA | Landscape and Visual Assessment Impact |
| LWS | Local Wildlife Site |
| NAQO | National Air Quality Objectives |
| NOx | Nitrogen Oxides |
| NEET | Not in Education, Employment or Training |
| NERC | Natural Environment and Rural Communities |
| NNR | National Nature Reserve |
| NP | National Park |
| NPPF | National Planning Policy Framework |
| NPPG | National Planning Practice Guidance |
| NPS | National Policy Statement |
| NSIP | Nationally Significant Infrastructure Projects |
| NSL | Noise Sensitive Locations |
| NSR | Noise Sensitive Receiver |
| NOx | Nitrogen Oxides |
| NVC | National Vegetation Classification |
| OWMP | Operational Solid Waste Management Plan |
| PEI | Preliminary Environmental Information |
| PIA | Personal Injury Accident |
| PINS | Planning Inspectorate |
| PLA | Port of London Authority |
| PM | Particulate Matter |
| PPE | Personal Protective Equipment |
| PPS | Planning Policy Statement |
| PPV | Peak Particle Velocity |
| Ramsar | The list of wetlands of international importance signed at the Ramsar convention, in Iraq, in 1971. |
| RDB | Red Data Book |
| SPA | Special Protection Area |
| SAC | Special Areas of Conservation |
| SNCI | Site of Nature Conservation Importance |
| SSI | Sites of Special Interest |
| SSSI | Site of Special Scientific Interest |
| SOCC | Statement of Community Consultation |

| | |
|---|---|
| SPA | Special Protection Area |
| SPZ | Source Protection Zone |
| SuDS | Sustainable Urban Drainage Systems |
| TE2100 | Thames Estuary 2100 is the Environmental flood risk plan set out to the year 2100. |
| TN | Target Note |
| UXO | Unexploded Ordnance |
| VDV | Vibration Dose Values |
| WFD | Water Framework Directive. European Union Directive 2000/60/EC. |
| WHO | World Health Organisation |
| ZTV | Zone of Theoretical Visibility |
| ZVI | Zone of Visual Influence |

# One ◆ Introduction

## OVERVIEW

1.1 This report identifies the proposed coverage or 'scope' of the environmental impact assessment (EIA) that will be undertaken in connection with the proposed development of the London Paramount Entertainment Resort at Swanscombe in Kent. The scoping report has been complied by Savills with inputs from technical consultants identified later in the chapter, on behalf of London Resort Company Holdings Limited (LRCH or 'the Developer').

1.2 The proposed Entertainment Resort will be a nationally significant visitor attraction and leisure resource. It will include an entertainment street, water park, theme park, events space, sporting facilities, , events and conference, creative spaces, service buildings and a staff training academy, as well as approximately 5,000 hotel rooms and substantial improvements to transport infrastructure. This will include a transport link Ebbsfleet International Station with the resort, a new direct road connection from the A2, a coach station and river bus facilities. The landscape strategy for the development will incorporate new habitats, quiet zones for visitors, enhanced river frontages and the extensive restoration of land used in the past for mineral extraction and industrial activities.

1.3 The site location is shown in figures 1.1 to 1.5. The Entertainment Resort would be located on the Swanscombe Peninsula, with transport connections to the south. The site extends across the border between the boroughs of Dartford and Gravesham, and has a frontage on the River Thames. The site as shown in figure 1.5 has an area of approximately 537 hectares (ha).

1.4 On 9 May 2014 the Secretary of State for Communities and Local Government confirmed that the London Paramount Entertainment Resort qualifies as a nationally significant business or commercial project for which development consent is required under the Planning Act 2008. The Developer must thus apply to the Secretary of State for a Development Consent Order (DCO), and has confirmed that EIA will be undertaken to help inform the Secretary of State's decision on this application.

## THE PROPOSED DEVELOPMENT

### The principal development

1.5 Chapter three of this scoping report provides a description of the site and the proposed development. In summary, the main elements of the proposed London Paramount

Entertainment Resort are as follows.

- A core 'resort' c. 45ha in area, featuring a range of events spaces, rides, studio attractions, cinemas, theatres, a water park, an open-air arena, night clubs, catering, retail and amenity facilities themed around the films and television programmes of Paramount Studios and UK producers.
- c. 30,000 square metres ($m^2$) of event space for conferences and trade shows.
- A range of hotels with a combined total of c. 5,000 bedrooms.
- Staff training facilities
- A country park and river bus access beside the River Thames.
- c. 14,000 car parking spaces for both visitor and staff use, located partly in multi-storey facilities, and bus and coach parking.
- A new four-lane dual carriageway between the core resort area and the A2(T) / B259 junction.
- Flood prevention works on parts of the site.
- Landscape works throughout the development, incorporating earth shaping, new planting and habitat creation.
- Provision of service infrastructure including water, electricity and gas supplies, telecommunications and arrangements for wastewater treatment and disposal.

1.6 The proposed general location of these elements of the development is shown illustratively in figure 1.6. The position of most of the project elements shown reflects their functional relationships and known site constraints. Within these constraints, the development layout will be subject to evolution in response to the emerging findings of the EIA and consultation responses. Once the position of proposed project elements is confirmed through this process, it is possible that the development boundary or 'Order limit' will retract to enclose an area smaller than the red line boundary shown in figure 1.5.

**Associated development**

1.7 Subject to the outcome of current design work and the EIA process, it is possible that the DCO application will include a need for 'associated development' in locations outside the red line boundary. Section 115 of the Planning Act 2008 allows development that is associated directly with the principal development to be included in the main DCO

application, subject to various qualifying conditions.

1.8 Examples of associated development cited in *Planning Act 2008: guidance on associated development applications for major infrastructure projects* (DCLG, April 2013) include:

- works to roads and footpaths;
- diversion or realignment of watercourses;
- the construction of new road, rail or footbridges;
- railway works;
- jetties;
- parking spaces for workers or users of the principal development;
- public transport infrastructure and services;
- construction compounds, temporary haul roads, vehicular marshalling facilities and construction laydown areas;
- connections to electricity, gas, telecommunications, water, and wastewater networks;
- landscape and planting works;
- flood defences and flood mitigation measures;
- water balancing facilities;
- creation of compensatory habitats or replacement green space;
- noise barriers;
- security measures.

1.9 As far as possible, LRCH intends that the London Paramount Entertainment Resort will be a self-contained development. However, certain of the works listed above might be required in order to integrate the development with the local environment and infrastructure networks. If this is the case, such works will be clearly identified and will be the subject of consultation and EIA.

## THE DEVELOPER AND PROJECT TEAM

### London Resort Company Holdings

1.10 LRCH is a UK-registered company established specifically to promote the current project. It was founded by a team with experience of delivering some of the world's largest leisure, sports and entertainment developments, and is supported by international investors. LRCH has entered a long-term licence agreement with Paramount Studios and is working towards similar licence agreements with UK film and television producers, its design team is working closely with these partners to develop individual attractions within the resort to uniformly high standards.

### The project team

1.11 LRCH's EIA team for the London Paramount Entertainment Resort comprises the following specialists.

**Table 1.1: EIA project team**

| Consultant | Responsibility |
|---|---|
| Savills | Planning consultant and EIA coordinator |
| Bircham Dyson Bell | Legal adviser (planning / DCO) |
| Farrells | Master planning architect |
| Ray Hole Architects | Core facilities architect |
| PWC | Socio-economic effects |
| WSP | Transport and access |
| Chris Blandford Associates | Landscape and visual effects and ecology |
| Buro Happold | air quality, noise, water resource management, energy and waste |
| Atkins | soil and ground conditions |
| Wessex Archaeology | Cultural heritage |

1.12 Contact details for the EIA coordinator are provided at the front of this document.

## PROJECT STATUS

1.13 Within the leisure and tourism industry the UK lacks a major world-class leisure and visitor attraction of this type. LRCH was formed in May 2011 to investigate the economic feasibility of such a development and to undertake a strategic review of potential locations.

1.14 For reasons explained in chapter three of this report, the Swanscombe Peninsula was

ultimately identified as the preferred location for the development. Environmental baseline studies on the site commenced during 2012. During 2013, EIA screening opinions were requested from Dartford BC and Gravesham BC on the assumption that conventional planning applications would need to be made under the Town and Country Planning Act 1990. The screening opinion consultation responses received by the local authorities provided helpful information and have been taken into account in the compilation of this EIA scoping report.

1.15 In the meantime, the Infrastructure Planning (Business or Commercial Projects) Regulations 2013 came into effect. The Regulations extended the range of developments that may be recognised to be nationally significant – and thus subject to the DCO process introduced by the Planning Act 2008 (as amended) - to include major conference, sport, leisure and tourism projects. On 9 May 2014, following an application by LRCH, the Secretary of State for Communities and Local Government confirmed that the current project is nationally significant and can be treated as development for which a DCO is required under the 2008 Act.

1.16 In accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009, LRCH will undertake an environmental impact assessment and will submit an environmental statement (ES) with the DCO application for the project. This scoping report has been prepared pursuant to these obligations.

## ENVIRONMENTAL IMPACT ASSESSMENT AND THE 'ROCHDALE ENVELOPE'

1.17 Environmental impact assessment is a process that aims to improve the environmental design of a development proposal and provide decision-makers with sufficient information about the environmental effects of implementing a project.

1.18 The results of the EIA process are set out in an environmental statement (ES). Where required, an ES is normally submitted with an application for planning permission or development consent, and provides environmental information about the scheme, including a description of the development, its predicted environmental impacts and the measures proposed to ameliorate any adverse effects.

1.19 For projects requiring development consent under the Planning Act 2008, the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) are applicable. These regulations set out the procedural requirements for undertaking an EIA. Regulation 8 enables a party intending to make a DCO application to ask the decision-maker to state in writing its opinion as to the information that should be provided in the ES. Such a request is made through the submission of an EIA scoping report that should, as a minimum, include:

- a plan sufficient to identify the land;
- a brief description of the nature purpose of the development and its possible effects

on the environment;

- such other information or representations that the applicant may wish to provide.

1.20 For practical reasons the Applicant wishes to maintain flexibility about the detailed design of elements of the project, including the content of the core studio park. At the same time, the developer acknowledges the essential need to provide sufficient information about the project to inform the EIA and, if required, the assessment of trans-boundary effects and the Habitat Regulations Assessment (see chapter six below). To these ends, the EIA will be undertaken in accordance with what is known as 'Rochdale Envelope' principles.

1.21 These principles are explained in Planning Inspectorate Advice Note Nine: *Using the 'Rochdale Envelope'* (version 2, April 2012). They arose from three court cases concerning outline planning applications for development requiring EIA. Based on the third of these judgements (R. v Rochdale MBC *ex parte* Milne (no. 2), 2000) the PINS advice note summarises the 'key propositions' of the Rochdale Envelope approach, as follows:

- *'the outline application should acknowledge the need for details of a project to evolve over a number of years, within clearly defined parameters;*

- *the environmental assessment takes account of the need for such evolution, within those parameters, and reflects the likely significant effects of such a flexible project in the environmental statement;*

- *the permission (whether in the nature of the application or achieved through 'master plan' conditions) must create 'clearly defined parameters' within which the framework of development must take place. It is for the local planning authority in granting outline planning permission to impose conditions to ensure that the process of evolution keeps within the parameters applied for and assessed;*

- *the more detailed the proposal, the easier it will be to ensure compliance with the Regulations;*

- *taken with those defined parameters of the project, the level of detail of the proposals must be such as to enable a proper assessment of the likely environmental effects, and necessary mitigation - if necessary considering a range of possibilities.*

- *The assessment may conclude that a particular effect may fall within a fairly wide range. In assessing the 'likely' effects, it is entirely consistent with the objectives of the Directive to adopt a cautious 'worst case' approach. Such an approach will then feed through into the mitigation measures envisaged. It is important that these should be adequate to deal with the worst case, in order to optimise the effects of the development on the environment' (para.122 of the Judgment);*

- *the level of information required is: 'sufficient information to enable 'the main,' or the 'likely significant' effects on the environment to be assessed…., and the mitigation measures to be described….' (para.104 of the Judgment);*

- *the 'flexibility' referred to is not to be abused: 'This does not give developers an excuse to provide inadequate descriptions of their projects. It will be for the authority responsible for issuing the development consent to decide whether it is satisfied, given the nature of the project in question, that it has 'full knowledge' of its likely significant effects on the environment. If it considers that an unnecessary degree of flexibility, and hence uncertainty as to the likely significant environmental effects, has been incorporated into the description of the development, then it can require more detail, or refuse consent' (para.95 of the Judgment);*

- *it is for the planning authority to determine what degree of flexibility can be permitted in the particular case having regard to the specific facts of an application. It will clearly be prudent for developers and authorities to ensure they have assessed the range of possible effects implicit in the flexibility provided by the permission. In some cases, this may well prove difficult'.*

1.22 During and after the current EIA scoping process, the Applicant will engage with consultees to ensure that the ES for the London Paramount Entertainment Resort project provides sufficient environmental information to enable them to discharge their statutory responsibilities effectively. The Applicant also aims to ensure that design detail in which there might be continuing public interest will be the subject of safeguarding DCO 'requirements' - similar to the planning conditions that attach to a conventional planning permission - so that such details are submitted for approval to the local planning authority.

## PURPOSE OF THIS REPORT

1.23 This report sets out the proposed scope and content of the EIA for the London Paramount Entertainment Resort project. The report has been prepared in accordance with Reg. 8 of the 2009 Regulations and reflects the guidance provided in Planning Inspectorate Advice Note 7 *Environmental Impact Assessment: Screening, Scoping and Preliminary Environmental Information* (version 4, July 2013).

1.24 Scoping helps to identify the main topics of interest and the information that should be included in the ES. If no likely significant environmental effects are identified under a given topic heading, then the Secretary of State can determine that the topic may be excluded from further consideration or 'scoped out' of the EIA.

1.25 Once a developer has submitted an EIA scoping report to the Planning Inspectorate, the Secretary of State has 42 days in which to adopt a scoping opinion. Before so doing, the Secretary of State must consult with a prescribed list of consultation bodies and with relevant non-prescribed consultation bodies identified in Planning Inspectorate Advice

Note 3 *EIA consultation and notification* (version 5, July 2013). Consultees are given 28 days in which to respond.

1.26 The Secretary of State must issue a scoping opinion before the end of the 42 day period. The Applicant will then ensure that the EIA reflects the advice given in the scoping opinion, and will also take into account the responses from the bodies consulted during the scoping process.

## REPORT STRUCTURE

1.27 This scoping report is structured as follows.

- Chapter two summarises the regulatory and policy context within which the DCO application for the London Paramount Entertainment Resort project will be made. It also considers the implications of a new local planning authority – the Ebbsfleet Development Corporation – being established in the near future.

- Chapter three provides a description of the application site and the proposed development. The chapter also summarises the principal site and development options that have been considered by the Applicant.

- Chapter four sets out the overall scope and structure of the EIA, including the consideration that will be given to transboundary effects.

- Chapters five to fourteen identify the proposed scope of individual EIA topics.

- The scoping report concludes with a glossary of technical terms.

- The Transboundary Screening Matrix is provided at appendix C.

## YOUR COMMENTS

1.28 London Resort Company Holdings welcomes comment on the potential significant environmental effects of the London Paramount Entertainment Resort project and the EIA methods described in this report. Comment is invited also on any other matters that should be addressed during the EIA and any sources of environmental information that would assist the EIA process.

1.29 Responses to this report should be sent within 28 days of receipt of this scoping request to:

National Infrastructure Directorate
The Planning Inspectorate
Temple Quay House
Temple Quay
Bristol
BS1 6PN

# Two ◆ Regulatory and policy context

## INTRODUCTION

2.1 Most applications for development projects that need for EIA require a conventional planning permission, granted under the terms of the Town and Country Planning Act 1990. The London Paramount Entertainment Resort project is different, being the first business or commercial proposal to be accepted by the Secretary of State as a project of national significance for which development consent is required under the Planning Act 2008.

2.2 This chapter explains the decision-making context for the London Paramount project. It begins with consideration of relevant European Union directives and then sets out how development consent applications are made under the Planning Act 2008. The implications of this for EIA are reviewed. The chapter then focuses on the local planning context, including relevant development plan provisions in the boroughs of Dartford and Gravesham and the establishment of the Ebbsfleet Development Corporation.

## EUROPEAN DIRECTIVES

2.3 Much environmental law of relevance to the current project originates in European Council directives and is transposed into law at the national level. The EIA for the London Paramount project will comply with requirements arising from the following directives.

### Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora

2.4 This Directive, known widely as the Habitats Directive, is the means by which the European Union meets its obligations under the Bern Convention.

2.5 The Bern Convention came into force in 1982. It aims to conserve wild flora and fauna and their natural habitats and to promote European cooperation in nature conservation. The Convention gives priority to the protection of endangered natural habitats and vulnerable species, including migratory species.

2.6 In response, the Habitats Directive promotes biodiversity by requiring EU Member States to take measures to maintain or restore identified natural habitats and wild species to a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures, Member States must take account of economic, social and cultural requirements, along with regional and local

characteristics.

2.7 The Habitats Directive was 'transposed' into UK law by the Conservation (Natural Habitats, etc) Regulations 1994, which were subsequently amended several times. The Conservation of Habitats and Species Regulations 2010 consolidate all the various amendments made to the 1994 Regulations in respect of England and Wales.

2.8 The Habitats Directive is relevant in the current context because it stimulated the designation of wildlife habitats deemed to be of European significance. These include Special Protection Areas (SPA) for wild birds and Special Areas of Conservation (SAC), which are known collectively as *Natura 2000* sites. Designated Ramsar wetlands of international importance are afforded protection by the same means. In the event that the current project has the potential to affect a designated European site, a Habitats Regulations Assessment (HRA) must be undertaken. This requirement is explained in the ecology chapter of this scoping report.

**Council Directive 2003/35/EC of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment**

2.9 This directive implemented the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, which the European Union signed on 25 June 1998. The Aarhus Convention covers access to information, public participation and access to justice in government decision-making, including planning decisions and environmental protection.

2.10 Amongst other things, the 2003 Directive amended European Directives on EIA in order to ensure that public participation provisions are consistent with the Aarhus Convention. In the current context, the public consultations and access to information provided for by the Applicant accord with the UK Planning Act 2008, which meets the requirements of the Aarhus Convention.

2.11 In accordance with the 2008 Act, the Applicant will publish a Statement of Community Consultation (SoCC) to explain how it will consult the local community, statutory consultees and other interested bodies prior to making a DCO application for the project. The SoCC will affirm that the project is EIA development and will explain how the preliminary environmental information arising from the EIA process will be consulted upon. The DCO application will be accompanied by a Consultation Report that will describe the consultations that the Applicant has undertaken, both for EIA purposes and generally.

**Council Directive 2008/50/EC of 21 May 2008 on ambient air quality and cleaner air for Europe**

2.12 This Directive merged much existing legislation into a single directive, and sets out the principles through which air quality should be managed and assessed. Subsequent 'daughter directives' have identified limits and monitoring arrangements for a range of specific pollutants. The 2008 Directive was transposed into UK legislation by the Air Quality Standards Regulations 2010, which are considered in the air quality chapter of this scoping report.

**Council Directive 2009/147/EC 30 November 2009 on the Conservation of Wild Birds**

2.13 This Directive provides a framework for the conservation and management of wild birds in the European Union. It sets broad objectives for a wide range of activities, with the precise legal mechanisms for their achievement left to the discretion of each member state. The main provisions of the Directive include the maintenance of the populations of all wild bird species across their natural range, and the designation of Special Protection Areas (SPAs) for rare or vulnerable species listed in Annex I of the Directive. As noted above, together with Special Areas of Conservation designated under the Habitats Directive, SPAs form a network of European protected areas known as *Natura 2000*.

2.14 In England and Wales the requirements of the 2009 Wild Birds directive are given effect through the Wildlife and Countryside Act 1981 and the Habitats and Species Regulations 2010. The requirements of these regulations as they relate to the London Paramount project are considered in the ecology chapter of this scoping report.

**Council Directive 2011/92/EU of 13 December 2011 and Amending Directive 2014/52/EU of 14 April 2014 on the assessment of the effects of certain public and private projects on the environment**

2.15 Under these directives, plan, programmes and projects that are likely to have significant effects on the environment must be subject to environmental impact assessment prior to being consented. The 2011 Directive consolidated a series of earlier EIA directives and, for major infrastructure projects such as the London Paramount Entertainment Resort, is transposed into UK law by the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 and the Infrastructure Planning (Environmental Impact Assessment) (Assessment) Regulations 2012.

2.16 The Amending Directive 2014/52/EU promotes the integration of EIA and other environmental directives including Habitat Regulations Assessment. Environmental statements will become 'EIA Reports' and must be written by 'competent experts'. EIA Reports must say more on demolition, operational effects, waste and vulnerability to accidents and disasters. Governments must monitor EIA development to ensure that

mitigation takes place.

2.17 The government has until 2017 to transpose the 2014 EIA Directive into UK law. However, the Applicant has sought to ensure that the EIA for the London Paramount project is consistent with the requirements of the new Directive. As explained in chapter one, the EIA will be undertaken by suitably qualified and experienced specialists. The ES will incorporate the information required to enable the requirements of the Habitats Directive to be fulfilled. Demolition, operational effects, waste and vulnerability to accidents and disasters will each be addressed in the ES, and the draft DCO requirements will include provisions for oversight by the Local Planning Authority to ensure that proposed environmental mitigation is implemented.

## UK LAW

### Planning Act 2008 (as amended)

2.18 The Planning Act 2008 created a new development consent regime for major infrastructure projects in the fields of energy, transport, water, wastewater and waste. The intention of the Act was to speed up the delivery of nationally significant infrastructure projects through a consenting process that incorporates:

- extensive pre-application consultation;
- a 'front-loaded' design and EIA process with limited scope to amend a proposal once an application is submitted;
- the incorporation of a wide range of consents and authorisations in a single DCO application in addition to planning permission, including the compulsory purchase of land;
- a clearly timetabled process for examining the application once submitted;
- applications determined in accordance with national policy statements approved in Parliament.

2.19 The 2008 Act was amended by the Localism Act 2011, which transferred responsibility for determining DCO applications from an Infrastructure Planning Commission to the relevant Secretary of State. Applications are administered by the Planning Inspectorate on the Secretary of State's behalf.

**Infrastructure Planning (Business or Commercial Projects) Regulations 2013**

2.20 These regulations widened the type of project that can be consented under the Planning Act 2008 to include a specified range of business, commercial and leisure projects. In March 2014 LRCH wrote to the Secretary of State for Communities and Local Government to request a direction allowing the London Paramount project to be treated as development of national significance, for which development consent is required under s.35 of the Planning Act 2008.

2.21 In a letter dated 9 May 2014, the Secretary of State confirmed that the project constitutes a nationally significant business or commercial project under the 2013 Regulations, and that the project should thus be the subject of a DCO application under the Planning Act 2008. London Paramount is the first project to be so accepted under the 2013 Regulations.

2.22 The Secretary of State for Communities and Local Government will thus determine the London Paramount proposal, having regard to the recommendations of the Planning Inspectorate in its capacity as the 'Examining Authority. Unlike other forms of development that can be determined under the Planning Act 2008, there are no National Policy Statements in respect of business and commercial development.

**Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended)**

2.23 These Regulations set out the procedural requirements for the carrying out of EIA in relation to projects requiring development consent under the Planning Act 2008.

2.24 Under Reg. 6(1) of the 2009 Regulations, a person who proposes to apply for a DCO must, before carrying out consultations under s.42 of the Planning Act 2008, either request an EIA screening opinion or notify the Secretary of State in writing that the applicant will provide an environmental statement in respect of the proposed development.

2.25 This scoping report constitutes written confirmation under Reg. 6(1)(b) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) that LRCH will provide an environmental statement for the London Paramount Entertainment Resort project.

2.26 Reg. 8 of the 2009 Regulations concerns applications for EIA scoping opinions. The current report complies with Reg. 8(3), which sets out the essential information that a scoping report should include.

2.27 Reg. 9 requires the Secretary of State to notify the consultation bodies of a DCO application requiring EIA. Under Reg. 9(3), subject to conditions, consultation bodies must make information relevant to the preparation of an environmental statement in their possession available to the Applicant upon request.

## NATIONAL GUIDANCE

2.28 Paragraph 3 of the National Planning Policy Framework (NPPF, March 2012) states,

*'This Framework does not contain specific policies for nationally significant infrastructure projects for which particular considerations apply. These are determined in accordance with the decision-making framework set out in the Planning Act 2008 and relevant national policy statements for major infrastructure, as well as any other matters that are considered both important and relevant (which may include the National Planning Policy Framework). National policy statements form part of the overall framework of national planning policy, and are a material consideration in decisions on planning applications.'*

2.29 As stated above, there is not a NPS for business and commercial development and therefore regard will be had to the relevant parts of NPPF, particularly during the site design and assessment process. Relevant guidance from National Planning Practice Guidance (NPPG, March 2014) will also be adhered to.

## THE LOCAL CONTEXT

### The development plan

2.30 Section 38(6) of the Planning and Compulsory Planning Act 2004, which requires that –

*'If regard is to be had to the development plan for the purpose of any determination to be made under the Planning Acts the determination must be made in accordance with the plan unless material considerations indicate otherwise'*

- is not engaged in decisions on whether to grant development consent under the Planning Act 2008. Nonetheless, the Applicant acknowledges that an up to date development plan provides valuable information on local planning, land use and environmental considerations.

2.31 The development plan for the area covered by the London Paramount site comprises:

- Dartford Core Strategy (adopted September 2011), along with saved policies from the Borough of Dartford Local Plan, adopted in 1995.
- Saved policies of the Gravesham Local Plan first review, adopted in 1994.

2.32 Both authorities are progressing new development plan documents, and these emerging plans will also be consulted during the design and assessment of the London Paramount proposals.

**Ebbsfleet Development Corporation**

2.33 In its budget in March 2014 the government announced plans to create a new garden city for Ebbsfleet, capable of providing up to 15,000 new homes based predominantly on existing brownfield land. This would be supported by up to £200 million of Government investment, to help unlock the infrastructure needed to create a garden city.

2.34 In August 2014 the government published a consultation paper seeking views on:

- the creation of a new statutory body, to be known as the Ebbsfleet Development Corporation (EDC), to lead development at Ebbsfleet;
- the geographical area in which the Ebbsfleet Development Corporation would operate;
- the planning powers it will be granted;
- the composition of its Board.

2.35 Annex A of the consultation paper identified the proposed area that could be controlled by the EDC. This proposed boundary is shown in figure 2.2 with the draft order limit for the London Paramount DCO overlaid. A large majority of the proposed London Paramount site would fall within the EDC's boundary as currently proposed.

2.36 At the time of writing it is anticipated that EDC will become the local planning authority in the area under its control. LRCH will seek to work closely with EDC and Dartford and Gravesham Borough Councils irrespective of the administrative arrangements that are ultimately confirmed.

# Three ◆ Project description

## INTRODUCTION

3.1 This chapter provides the description of the project on which this EIA scoping report is based. It begins with a summary explanation of how the proposed site for the development was identified, and proceeds to describe the site and its surroundings. The proposed development project is then described. Finally, the principal development and transport options considered thus far are outlined.

3.2 It is important to highlight that the project is at an early stage, and that the content of the development will be subject to evolution as the linked processes of EIA, design and stakeholder consultation move forward. In response, the scope of the environmental studies described in this report has been defined broadly to ensure that the EIA process can accommodate future design refinements.

## SITE SELECTION

3.3 Prior to the selection of Swanscombe Peninsula as the site for the London Paramount Entertainment Resort, a number of potential site location options were identified and evaluated against a series of planning, environmental, commercial and transport considerations. The criteria used included:

- Sites of sufficient size and topography to accommodate the scale of facilities required in the desired layout (minimum site size of approximately 80 hectares with additional areas for expansion);
- Locations free from vexatious and abnormal planning constraints and jurisdictions;
- Sites in accessible locations;
- Locations that would support the London Paramount brand (i.e. close proximity to London);
- Locations where there are an absence of hotel and leisure uses that would compete with the entertainment resort;
- Sites where access improvements and utility infrastructure investment could be achieved in reasonable timescales and potentially in combination with other nearby projects;

- Sites in close proximity to public transport links and major airports;
- Locations that have an acceptable micro climate (i.e. conducive to year round use);
- Locations where it would be possible to provide new or upgraded off-site access and utility works; and
- Locations where land was available, that could be purchased at commercially acceptable terms and there was unlikely to be conflicts with existing users.

**Site options**

3.4 The broad 'areas of search' and potential site options considered are set out in table 3.1 below and on figure 3.1.

**Table 3.1: Areas of search and potential sites**

| No. | Area of search | Potential sites |
|---|---|---|
| 1 | 'Northamptonshire; (Corby, Kettering, Wellingborough and Northampton) | No suitable site found |
| 2 | Marston Vale | 2a– Hanson's former brickworks, Stewartby |
| 3 | Luton / Dunstable | No suitable site found |
| 4 | M11 Corridor (Stansted / Bishop's Stortford / Harlow) | No suitable site found |
| 5 | A12 Corridor | 5a – Great Leighs Racecourse, North of Chelmsford |
| 6 | M25 Corridor North | 6a – Willows Farm Village (Jn22 near St Albans) |
| 7 | Olympic Park Legacy Development Sites, London | 7a – Stratford Waterfront<br>7b – Olympic Quarter<br>7c – Old Ford<br>7d – Hackney Wick East<br>7e – Stratford Village<br>7f – Pudding Mill Lane |
| 8 | Southend-on-Sea / Canvey Island, South Essex | No suitable site found |
| 9 | Ebbsfleet Valley, North Kent | 10a – Swanscombe Peninsula |
| 10 | Cliffe, North Kent | No suitable site found |
| 11 | Ashford, Kent | No suitable site found |

3.5 Following this process, Swanscombe Peninsula was considered the best option in terms of meeting the site selection criteria. It was subsequently selected by LRCH as the preferred site for the location of the London Paramount Entertainment Resort.

3.6 Further information on the site selection process would be provided in the 'alternatives' section of the ES.

## DESCRIPTION OF THE PREFERRED SITE AND SURROUNDINGS

**Site context**

3.7 The Project Site lies c. 30 km east-south-east of central London on the south bank of the Thames estuary, in the county of Kent. The site occupies much of the Swanscombe Peninsula, formed by a meander in the river, with a corridor for transport connections extending generally southwards to the A2 trunk road.

3.8 The site is bisected by the municipal boundary between the boroughs of Dartford to the west and Gravesham to the east. The urban areas of Stone, Northfleet, Swanscombe and Greenhithe are located to the east and west of the Project Site. The later two settlements are largely residential in character, whilst Northfleet and Stone comprise mixed residential and industrial uses. Ingress Park is located to the west of the site.

3.9 Each of these settlements has a district centre providing community, retail and commercial services. The locality is also served by the principal town centres in the two boroughs, at Dartford and Gravesend (in Gravesham). Beyond Greenhithe to the south-west of the project site lies the Bluewater shopping centre. This is a significant retail development that provides 154,000 square metres of retail floorspace and 13,000 car parking spaces on a 97 hectare site.

3.10 To the south of the A2(T) the land is more open and rural in character, with small settlements amid farmland and woodland blocks. Most of this area lies within the Metropolitan green belt.

3.11 The north bank of the Thames estuary adjacent to Swanscombe Peninsula is also extensively developed, local settlements including West Thurrock, South Stifford, Grays and, to the north-east, the major port and town of Tilbury. Both banks of the estuary feature wharves, jetties and port-related uses, some of which are inactive.

3.12 Aside from the river, the principal transport links in the locality include the HS1 high speed railway, which provides Eurostar train connections between London, Paris, Brussels and other cities. Ebbsfleet International Station is located to the south of Swanscombe Peninsula. The railway line passes partly in cutting and partly in a tunnel beneath Swanscombe Peninsula *en route* to London St Pancras station. The Kent Coast railway, which crosses the southern edge of the Swanscombe Peninsula in an east-west direction, provides local services between London and North Kent, with local stations at Swanscombe and Northfleet. All three stations are located outside of the proposed Project Site.

3.13 Strategic highway routes in the locality include the A2(T), which provides a connection between junction 2 of the M25 motorway to the west and junction 1 of the M2 motorway beyond Gravesend to the east. The Dartford Tunnel and Queen Elizabeth II Bridge crossings of the River Thames lie c. 3 km to the west of the site.

3.14 The principal local roads include the A226 London Road / Galley Hill Road that runs east-west across the southern side of the Swanscombe Peninsula, and the B255, B259 Southfleet Road and the B2175 / A2260 Springhead Road, all three of which provide north-south links between the A226 and the A2(T).

3.15 The locality has a distinctive landform, considerably modified by human activity. From the low-lying banks of the Thames the terrain generally rises southwards to a ridge that is typically 25 metres above ordnance datum (AOD). However, the natural topography has been considerably altered by extensive mineral workings – principally the winning of chalk for the manufacture of cement and other building products. The extensive voids created by mineral extraction include Eastern Quarry to the south-west of the site, now allocated for housing and other development. Some of these former chalk pits have been used for waste landfill, including an area to the West of Ebbsfleet International Station within the Project Site.

**The Project Site**

3.16 The Project Site comprises approximately 537 hectares of land in a complex shape, shown in figure 1.5. The area in which the London Paramount Entertainment Resort would be located comprises land on and to the south of the Swanscombe Peninsula, and a corridor of land required for transport connections running in a broadly north-south direction between the Peninsula and the A2(T). The site also includes approximately 3.5 km length of the A2(T) corridor between established junctions at Bean in the west (A2(T) / B255) and Pepper Hill (A2(T) / A2260) in the east. Temporary development requiring an off-site location would be located to the east of the core resort. For the purposes of this description section, the Project Site is split into two areas: the Swanscombe Peninsula on which the Entertainment Resort is proposed, and the transport corridor running south to and then along the A2(T).

3.17 The Ordnance Survey grid references for the extremities of the Swanscombe Peninsula and the transport corridors are as follows.

***Swanscombe Peninsula***

- 559538, 175215
- 560551, 176780

- 561249, 175001
- 560464, 174822

***Land between Swanscombe Station and the A2(T)***

- 560698, 174701
- 561008, 174714
- 561260, 172882
- 561704, 172902

***A2(T) corridor***

- 558500, 173010
- 558760, 172598
- 561336, 171994
- 562325, 172165

3.18 The majority of the site within the Swanscombe Peninsula comprises open, low-lying land with extensive former cement kiln dust (CKD) tips and other brownfield former-industrial land. A number of drains, aeration lagoons and other features are also present. Parts of the Peninsula have re-vegetated naturally but areas of bare ground remain.

3.19 The Swanscombe Peninsula retains extensive marshland areas including Botany Marshes, Broadness Salt Marsh and Swanscombe Marshes. Botany Marshes and Swanscombe Marshes are largely bordered by industrial estate areas and works associated formerly with CKD processing.

3.20 The Project Site has an irregular topography because of the historic CKD tipping activities. Two raised areas of tipped material rise to over 12/13 metres AOD. A large part of the north of the Peninsula has been raised from an assumed original height of 2 - 3 metres AOD to approximately 8.75 metres AOD. Where it meets the River Thames, the Peninsula is surrounded by flood defence embankments and terraces that rise to approximately 6 metres AOD. Small areas of remnant salt marsh are located at the base of the flood defences.

3.21 In terms of its underlying geology, the Project Site lies in the eastern part of the London

Basin, which is underlain by white chalk. The underlying chalk is designated by the Environment Agency to be a Principal Aquifer and is the main source of potable water in the area. The majority of the Project Site thus lies within a groundwater Source Protection Zone (SPZ). The Peninsula itself is overlain by alluvium, comprising silts and clays.

3.22 The banks of the Peninsula feature occasional jetties and inlets, some of which are used for mooring and landing boats. The inlet at the northern end of the Peninsula has attendant boat sheds and workshops. A small number of public footpaths cross the Project Site and include Saxon Way, which runs along the western flood embankment.

3.23 High voltage electricity transmission lines cross the Peninsula on a south-east to north-westerly alignment, and include a 190 metre tall 'superpylon' in the north of the Project Site that lifts the transmission lines over the Thames to a similar tower on the northern bank. This is reportedly the UK's tallest electricity pylon and is a prominent local landmark.

3.24 North of the HS1 tunnel entrance is a derelict wastewater treatment works.

3.25 A Port of London Authority (PLA) radar beacon is located at the northern tip of the Peninsula.

3.26 The HS1 high speed railway crosses the Peninsula on a south-east to north-westerly alignment. The southern section is in cutting and the remainder in a tunnel.

3.27 Habitats on the Project Site include patches of woodland, scattered areas of scrub and improved and semi-improved grassland. It does not contain any international, national or local wildlife designation. Wetland habitats include wet grasslands along the marshes (Black Duck Marshes), grazing marsh and reedbeds in Black Duck and Botany Marsh, with ponds of standing open water and drainage ditches. There are also fragments of saltmarsh and mudflats within the sea defence embankments.

3.28 Areas of degraded post-industrial land extend across the section of the Project Site which extends south towards the A2. Within this area is also located a large surface level car park and associated road network, which serves Ebbsfleet International Station.

3.29 The A2(T) / B259 junction allows eastbound and westbound traffic to exit the A2(T) at the southern extent of the site and also allows traffic to access the A2(T) in a westbound direction. Traffic heading eastwards from the site area is able to access the A2(T) at the Pepper Hill (A2(T) / A2260) junction (less than 1km away). Springhead Nurseries and the HS1 high speed railway line are located to the immediate east of the A2(T) / B259. A large electricity compound is located immediately to the west. Agricultural fields and some isolated farm buildings and dwellings are located to the immediate south of the junction. A large disused works and chalk pits is located immediately to the north of the A2(T) between the A2(T) / B259 and A2(T) / B255 junctions.

3.30 The Pepper Hill (A2(T) / A2260) junction, provides access to Northfleet in the north and Northfleet Green, Southfleet and Betsham in the south. The (A2(T) / B255) junction at Bean connects into Stone and Greenhithe via the B255 and the A296. Blocks of woodland border the A2(T) at the A2(T) / B255 junction. Bluewater Retail Park is located less than 1km from this junction and accessed directly from the B255. At Greenhithe the B255 connects to the A226, which provides access to the Swanscombe Peninsula from the west.

## PROJECT DESCRIPTION

### Overview of the development

3.31 The London Paramount Entertainment Resort is intended to be a new entertainment experience with a global profile in tourism and leisure markets. In marketing terms the intention is for the Resort to be a place where 'the best of Hollywood meets the best of British'. The development aims to be the premier entertainment destination in Europe, visited by approximately 15 million people a year.

3.32 It is intended that the development would deliver transformational benefits locally, regionally and nationally by creating approximately 6,000 construction jobs and up to 27,000 direct and indirect, permanent jobs. It will, seek to incorporate the highest standards of environmental design and management.

3.33 As currently conceived, the main elements of the proposed London Paramount Entertainment Resort are as follows.

- A core 'entertainment resort' circa 45 ha in area, featuring a range of events spaces, rides, studio attractions, cinemas, theatres, a water park, night clubs, catering, retail and amenity facilities themed around the films and television programmes of Paramount Studios and UK producers.
- c. 30,000 square metres (m2) of event space for conferences and trade shows.
- staff training facilities.
- A range of hotels with a combined total of c. 5,000 bedrooms.
- A country park beside the River Thames.
- River bus access from the Thames.
- c.14,000 car parking spaces for both visitor and staff use, located partly in multi-storey facilities, and bus and coach parking.

- A transport interchange, including a ticket office.
- A new four-lane dual carriageway between the entertainment resort area and the A2(T) / B259junction.
- Flood prevention works on parts of the site.
- Landscape works throughout the development, incorporating earth shaping, new planting and habitat creation.
- Provision of service infrastructure including water, electricity and gas supplies, telecommunications and arrangements for wastewater treatment and disposal.
- Improvements to the highway network (if required).

3.34 As noted in chapter one of this report, the proposed general arrangement of these elements of the development is shown, in concept and purely for illustrative purposes in figure 1.6. The anticipated illustrative phasing of development is shown on figure 3.2. The position of most of the project elements shown reflects their functional relationships and known site constraints. Within these constraints, the development layout will be subject to evolution in response to the emerging findings of the EIA and consultation responses. Once the position of proposed project elements is confirmed through this process, it is possible that the development boundary or 'Order limit' will retract to enclose an area smaller than the red line boundary.

**The core Entertainment Resort**

3.35 The content of the Entertainment Resort is subject to evolution and it should be recalled that the DCO application will work within Rochdale Envelope parameters. However, to provide an indication of its content, the current intention is that this core area of the development will contain the elements described below. LRCH reserves the right to amend the proposed content of the core area as the project design evolves.

3.36 Five zones within the Entertainment Resort would provide a range of experiences based around Paramount films and productions. For illustration, the zones might be called 'Family', 'Action and Adventure', 'Comedy', 'Romance and Drama' and 'Classics' and would include a number of rides suitable for families, children and the more adventurous thrill-seeking visitor.

3.37 Located at the heart of the core area, the Entertainment Street would provide a wide range of indoor and open-air experiences.

3.38 During the day visitors would be able to enjoy various attractions with a science or education focus. This would be complemented by a c. 11,000$m^2$ exhibition space (The

Great Exhibition). It is proposed that Entertainment Street would host a number of events each year and that the facilities could also accommodate music concerts. Where required, the facilities could be coordinated in order to accommodate major events requiring all or several of the venues. Visitors wishing to shop would have a choice of approximately 15,000 $m^2$ of retail space related to the Entertainment Resort.

3.39 Late afternoon every day a parade, the 'Paramount and Friends Carnival', would take place within the resort. This would be followed every evening by a show that would involve a cast of over 300 people and would celebrate aspects of the Paramount studios and other brands.

3.40 In the evening, a combination of theatres and indoor and outdoor venues would provide West End productions and shorter format shows. These venues would showcase Paramount films and provide a stage for live comedy acts and concerts. A range of restaurants and food outlets would be available. A number of nightclubs would provide late-night entertainment options.

***Water park***

3.41 An indoor water park located on the edge of the core area would provide a distinctive visitor experience, based again on Paramount films and other brands. It is anticipated that this would be the largest indoor facility of its kind in Europe.

***Event spaces***

3.42 The proposed development will include a range of facilities for exhibitions and events. These will include facilities for sports and music events, conferences, trade shows and product launches.

**Staff training facilities**

3.43 LRCH will provide a range of on-site training facilities for Resort staff. This is essential in order to ensure that staff understand the brand values that LRCH wishes to promote and receive the highest standards of training and continuing professional development in hospitality, entertainment and the attendant security, health and safety considerations.

**Hotel accommodation**

3.44 A range of hotels with a total capacity of approximately 5,000 bedrooms would provide accommodation for a range visitors. Some of the hotels will be themed to provide a strong linkage with other resort attractions.

**Country park**

3.45 It is proposed that the northern part of the Project Site, incorporating part of Broadness Salt Marsh, will be the subject of landscape and habitat improvement works. Aside from the inherent visual and biodiversity benefits, this area would serve as a quiet zone for Resort visitors, affording opportunities to relax in natural surroundings and to appreciate the local ecology and views over the river

**Access and parking facilities**

3.46 A new four-lane dual carriageway would be built between the Ebsfleet junction of the A2(T) and the Entertainment Resort. It would provide direct access for visitors and staff to approximately 14,000 car parking spaces (including multi-storey facilities), and bus and coach parking facilities. It would also provide access to the service entry point. The existing B259 and A2260 would continue to provide access to Swanscombe and Northfleet, unimpeded by visitor traffic to the Resort.

3.47 As explained in the transport chapter of this scoping report, LRCH proposes to prepare and implement a travel plan which would consider opportunities for non-car based transport modes for staff.

3.48 The opportunity to create landing stations on the Peninsula to facilitate visitor access via the River Thames would be considered.

**Landscape proposals**

3.49 A landscape strategy, which responds to the different landscape character types present across the site, would provide the setting for rides, attractions and amenities. Within the core area of the Resort, it would also contribute to the theming and branding of each area and attraction.

3.50 For the site as a whole an important landscape objective will be to integrate the proposed development into its local setting and also with future plans for Ebbsfleet Garden City.

3.51 The landscape strategy would include earth shaping and landscape planting. Botany Marsh, Broadness Salt Marsh and Black Duck Marsh would be subject to habitat enhancement works to improve biodiversity value within these areas and to strengthen the green infrastructure network. Earth shaping would also serve to protect the proposed development from future tidal flood risk associated with the River Thames.

### Service infrastructure

3.52 The development will incorporate a comprehensive strategy for service infrastructure provision, with an emphasis on resilience and sustainability. The strategy will embrace electricity, heat and supply and the sustainable management of waste and wastewater.

### Associated development

3.53 By extending the Project Site along the A2(T) to established junctions at Bean in the west and Pepper Hill in the east, it is anticipated that highway improvement works associated with the development will be contained within the site as defined.

3.54 Should associated development be identified, LRCH will ensure this is highlighted in the consultation and EIA processes.

## DEVELOPMENT OPTIONS CONSIDERED

3.55 Since the identification of Swanscombe Peninsula as a potentially suitable site for the London Paramount Entertainment Resort, a number of scheme layout and design reviews have taken place to reflect the opportunities and constraints present in terms of planning, environmental and technical considerations and feedback received from a range of statutory consultees.

3.56 The 'alternatives' section of the ES will explain the scheme options considered and how feedback received from statutory consultees, interested parties and members of the public informed the layout and design process.

# Four ◆ Proposed scope and structure of the Environmental Statement

## GENERAL APPROACH – EIA AND PROJECT DESIGN

4.1 In accordance with best practice, LRCH will ensure that the emerging findings of the EIA can be fed back to the design team in a timely manner so that environmental harm can be avoided and effective mitigation measures are 'designed in' as an integral part of the project design. Simultaneously, emerging designs will be communicated to the EIA team so that they might be assessed accurately. An iterative process of project refinement will thus take place and will be maintained throughout the planning and delivery of the project.

4.2 Effective consultation will be vital to both the design and EIA process. During the course of 2014, LRCH initiated two informal public consultation exercises and has held a range of exploratory discussions with statutory and other consultees. Formal consultations and publicity, as required under sections 42, 47 and 48 of the Planning Act 2008, are programmed for 2015.

4.3 Irrespective of its duty to take account of formal consultation responses under s.49 of the 2008 Act, LRCH will review consultation responses systematically in pursuit of a project that responds to the local social, economic and environmental context. By this range of means, it is intended that a well-presented DCO application, accompanied by a comprehensive and reliable Environmental statement, can ultimately be submitted.

## CONSULTATIONS ON THE SCOPE OF THE EIA

4.4 Regulation 8(6) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) states that before adopting a scoping opinion, the Secretary of State must consult the prescribed consultation bodies and relevant non-prescribed consultation bodies and take into account the responses received. The Planning Inspectorate Advice Note Seven: *Environmental Impact Assessment: Screening, Scoping and Preliminary Environmental Information (July 2013)* explains the benefit of applicants undertaking their own information consultation prior to the submission of a scoping opinion and states, *'prior to submitting a scoping request, applicants may wish to undertake their own informal consultation with the prescribed consultation bodies, or others, to inform the information provided within the scoping request.'*

4.5 LRCH has begun early, non-statutory consultation with certain prescribed consultees for the purposes of EIA scoping. Those consulted to date are set out in Table 4.1 below

**Table 4.1: Parties consulted during the preparation of the EIA scoping report**

| Consultee | Topic |
|---|---|
| Dartford Borough Council | Environmental health, planning |
| Gravesham Borough Council | Environmental health, planning |
| Kent County Council | Transport, ecology, landscape, heritage and visual |
| Highways Agency | Highways |
| Environment Agency | Ground water pollution and waste, ecology |
| English Heritage | Cultural heritage and archaeology, |
| Natural England | Ecology |

4.6 The responses received from the prescribed consultees are described in detail in the topic specific chapters of this report. Further consultation will be undertaken with prescribed consultees, other statutory consultees and interested parties, during the preparation of the environmental statement, and in response to the formal EIA scoping consultation responses.

4.7 While separate from the EIA scoping process, formal consultation with relevant parties prior to the submission of the application is required to satisfy the requirements of the Planning Act 2008 and the associated secondary legislation. This would be set out in a Statement of Community Consultation (SoCC), which would explain how LRCH intends to consult with the local community, including people living in the vicinity of the land it wants to develop. The SoCC would also set out how the local community can access the Preliminary Environmental Information (PEI) which will be prepared by LRCH in due course. LRCH will consult with others including relevant local authorities, other 'statutory consultees' and persons with an interest in land prior to the submission of the DCO application.

## SIGNIFICANCE CRITERIA

4.8 The significance of environmental effects resulting from the construction, operation and decommissioning of the London Paramount Entertainment Resort will generally be assessed in the ES using a series of matrices. The matrices will describe the sensitivity of receptors which have the potential to be effected by the development and the magnitude of any effects that are likely to arise. The magnitude of effect and sensitivity of receptor would be cross-referenced to give an overall significance of effect for any potential impact. Where it is not possible to quantify effects, qualitative assessments would be carried out, based on available knowledge and professional judgement.

4.9 The assessments would generally follow the structure and use the terminology outlined in the tables below. In a limited number of cases, significance criteria might need to

differ depending on the conditions encountered at the site. The criteria would therefore be subject to further discussion with statutory consultees. Each technical chapter of the ES would clearly identify and explain the specific criteria used.

4.10 Potential mitigation measures would include embedded mitigation through design/standard control measures, which would be used to produce an initial assessment of effects, and any further specific mitigation that would be taken into account to produce an assessment of residual effects.

**Table 4.2: Determining receptor sensitivity**

| **Sensitivity** | **Example** |
|---|---|
| Very High | Internationally designated site (e.g. Ramsar / SPA / World Heritage Site). |
| High | Nationally designated site (SSSI) / designated Landscape (e.g. NP) / principal aquifer / main watercourse / human health. |
| Medium | Regionally designated ecology / heritage site / secondary aquifer / minor watercourse |
| Low (or lower) | Locally designated ecology / heritage site; area of hardstanding / brownfield land / industrial site / low ecological value. |
| Negligible | No sensitivity to change |

**Table 4.3: Determining the magnitude of impact**

| **Magnitude** | | **Example** |
|---|---|---|
| Major | Adverse | A permanent or long term adverse impact on the integrity and value of an environmental attribute or receptor |
| | Beneficial | Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality. |
| Moderate | Adverse | An adverse impact on the integrity and/or value of an environmental attribute or receptor, but recovery is possible in the medium term and no permanent impacts are predicted. |
| | Beneficial | Benefit to, or addition of, key characteristics, features, or elements or improvement of attribute quality. |
| Minor | Adverse | An adverse impact on the value of an environmental attribute or receptor, but recovery is expected in the short- term and there would be no impact on its integrity. |
| | Beneficial | Minor benefit to, or addition of key characteristics, features or elements; some beneficial impact on attribute |

| | | |
|---|---|---|
| | | or a reduction in the risk of a negative impact occurring. |
| Negligible | Adverse | Very minor loss |
| | Beneficial | Very minor benefit |
| No change | | No change would be perceptible either positive or negative |

**Table 4.4: Determining the significance of effect**

| | | Magnitude of impact | | | | |
|---|---|---|---|---|---|---|
| | | **No change** | **Negligible** | **Minor** | **Moderate** | **Major** |
| **Receptor Sensitivity** | Very high | Neutral | Slight | Moderate | Large | Very large |
| | High | Neutral | Slight | Moderate | Large | Large |
| | Medium | Neutral | Slight | Slight | Moderate | Large |
| | Low | Neutral | Slight | Slight | Slight | Moderate |
| | Negligible | Neutral | Neutral | Neutral | Neutral | Neutral |

4.11 Where relevant, 'study areas' would apply to the assessment of effects under specific topic areas. The study areas would vary in size depending on the assessment to be undertaken. Study area sizes are identified and justified in the topic specific chapters of this scoping report and plans provided where relevant.

## ASSESSMENT OF CUMULATIVE EFFECTS

4.12 The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) require the EIA to take into account the potential cumulative effects of the development and other existing and planned development (currently within the planning system) in the area of the proposed site.

4.13 The EIA will consider the cumulative effects of the construction, operation and decommissioning phases of the London Paramount Entertainment Resort. LRCH will liaise with the relevant local planning authorities to identify any other developments in the area that should be considered. At present it is envisaged that the following developments would be included in the cumulative assessment:

- Ebbsfleet Garden City
- Crossrail
- Lower Thames Crossing
- London Gateway Port

## TRANSBOUNDARY SCREENING MATRIX

4.14 Certain types of major development might exert environmental effects that extend beyond the boundary of the nation-state in which the development would be located. Planning Inspectorate Advice Note 12: *Transboundary Impacts Consultation* (version 3, April 2012) offers guidance on the procedures for transboundary consultation associated with a DCO application.

4.15 PINS Advice Note 12 (page 2) explains that:

*'The United Nations Economic Commission for Europe (UNECE) Convention on Environmental Impact Assessment in a Transboundary Context was negotiated to promote environmentally sound and sustainable development, whilst also enhancing international co-operation in assessing environmental impact, in particular in a transboundary context. The Convention was adopted in 1991 in the Finnish city of Espoo – hence the 'Espoo Convention'. The Convention requires that assessments are extended across borders between Parties1 of the Convention when a planned activity may cause significant adverse transboundary impacts . . .*

*The Espoo Convention has been implemented by the EIA Directive and transposed into UK law by way of the EIA Regulations, specifically under regulation 24 of the EIA Regulations. This means that decisions taken by the Secretary of State on nationally significant infrastructure projects (NSIPs) under the Planning Act regime will be subject to the procedural requirements of regulation 24 of the EIA Regulations.'*

4.16 PINS Advice Note 12 (page 4) explains the role of developers and offers the following advice:

*'As part of their request to the Secretary of State for a scoping opinion, developers are strongly encouraged to identify both the possible significant transboundary impacts or, where applicable, why they consider that there would not be any significant impacts on the environment of another EEA State. A clear way of presenting the information would be in the form of a screening matrix and developers are encouraged to adopt such an approach. This will help the Secretary of State to identify in their scoping opinion the matters to be considered in the environmental statement which relate to transboundary impacts.'*

4.17 A transboundary screening matrix for the London Paramount Entertainment Resort project is provided in appendix A of the scoping report. The following potential significant transboundary effects have been identified and a high-level assessment undertaken:

- *Traffic and transport* - significant traffic and transport effects could occur where visitor trips between EEA States and the UK give rise to transportation capacity problems (particularly in sensitive areas) which cannot be mitigated. The

transboundary screening matrix has concluded that, in the context of the daily people trips between the UK and EEA States, it is likely that the increase in trips that could be attributed to London Paramount would be negligible and that many of the overseas people visiting London Paramount would already be staying in the region anyway. It is therefore likely that the existing transport network would be able to accommodate the increase with only limited modification.

- *Air quality* - significant air quality effects could occur where increases in trips between EEA States and the UK give rise to traffic-related emissions which have an adverse effect on residential properties in terms of local air quality, or ecologically sensitive designated sites and cannot be mitigated. The transboundary screening matrix concludes, as the increase in trips between the UK and EEA states attributed to London Paramount is considered negligible, it is likely that emissions of traffic related pollutants in EEA States that are directly attributable to London Paramount will be insignificant in terms of effects on the local air quality of residential properties near major transport routes and environmentally sensitive designations

- *Socio-economic* - significant economic effects could occur where the proposed development has either a positive or negative effect on the economy of an EEA State. Negative effects could occur through the redistribution of visitors from EEA State visitor attractions to the UK and / or where business opportunities are created in the EEA States (directly or indirectly) as a direct result of the Proposed Development. The transboundary screening matrix identifies that London Paramount may result in a reduced number of people visiting entertainment resorts in EEA States which may result in reduced gross domestic product in certain states. However, in the context of the overall tourism numbers for the EEA States identified, any potential reduction is likely to be negligible and the effects on economies insignificant. It is considered that the overall level of GDP within EEA States would increase as a result of the operation of London Paramount.

4.18 As set out above, it is not considered that the proposal would give rise to significant transboundary effects on EEA States. However, as the EIA process progresses, LRCH will seek to define potential transboundary effects with clarity and will involve affected parties in consultations in a timely manner if required.

## THE PROPOSED STRUCTURE OF THE ENVIRONMENTAL STATEMENT

4.19 Table 4.5 sets out the proposed structure of the main ES document. In compliance with relevant policies, a number of supporting documents will also be submitted to the Secretary of State as part of the DCO application. These are summarised in Table 4.6 below.

**Table 4.5: The proposed structure of the environmental statement**

| Section | Description |
|---|---|
| Introduction | Providing:<br>• A brief introduction to the Developer;<br>• An overview of London Paramount project;<br>• A description of the consenting regime; and<br>• A description of the purpose and structure of the ES. |
| Project Description | Detailed description of the project and how the different aspects are interconnected / interrelated. Also provides an outline of the proposed construction methods and indicative programme, including working hours etc. |
| Site Description | To describe the site settings and surroundings of the development site |
| Project Development and Alternatives | To include a description of:<br>• Site selection; and<br>• Alternative layout / design options |
| EIA Assessment Methodology | Detailing the assessment methodology that the EIA has followed. |
| ES Main Impact Sections | This sub-section would present the results of the EIA that has been undertaken. Accordingly, the following sub –sections would be provided:<br>• Planning and legislative context<br>• Air Quality;<br>• Noise and vibration;<br>• Ecology;<br>• Soils and ground conditions<br>• Water resource management<br>• Landscape and visual;<br>• Energy, waste and sustainability<br>• Traffic and Infrastructure;<br>• Cultural heritage / archaeology;<br>• Socio-economics; and<br>• Cumulative assessment (if not addressed in individual chapters)<br>• In-combination effects.<br><br>The ES chapters would follow a standard format under the following main headings:<br><br>• Relevant law, policy and best practice guidance<br>• Relevant designations<br>• Baseline studies<br>• Consultations undertaken to date |

| | |
|---|---|
| | • Outline assessment methodology<br>• Assessment significance criteria<br>• Potential mitigation measures and residual effects<br>• Potential effects on European protected sites<br>• Potential transboundary effects<br>• Topics scoped out of further assessment |
| ES Volume 2 | Containing technical appendices |
| ES Volume 3 | Containing all figures associated with the ES |
| Non-Technical Summary | Providing a summary of the main finding of the ES in easy to understand, non-technical language |

4.20 The in-combination effects of the proposal on sensitive receptors would be considered through a specific in-combinations effect ES chapter, which would include an in-combination effects matrix.

**Table 4.6: Supporting planning and environmental documents for the DCO application**

| Document Name | Description |
|---|---|
| Design and Access Statement | Provides details on the main access and egress routes to the site and the design process and philosophy that have been followed in developing the project. |
| Planning Statement | Describing the planning policy background and demonstrating that the project has been developed in compliance with the relevant NPSs and other relevant and important considerations. |
| Consultation Report | Consolidating all consultations that have taken place throughout the project, and how issues raised have been addressed. |
| Appropriate Assessment | The Proposed Development could have a potential effect on a number of designated sites within the surrounding area, including those of national and international significance. The extent of potential effects cannot be fully assessed until further details on the Proposed Development are provided. |
| Statement to Inform Habitat Regulations Assessment | Depending on the potential for impacts on designated European sites, a Habitat Regulations Assessment or Statement to inform a Habitat Regulation Assessment may be required. This will draw on the Ecology chapter of the ES. |

4.21 The DCO application would be supported by a Construction Environment Management Plan (CEMP) which will set out best practice methods for mitigating the impacts of construction.

# Five ◆Landscape and visual effects

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

5.1 The following relevant law, policy and best practice guidance will be considered by the assessment:

### European Landscape Convention

5.2 The European Landscape Convention (ELC), a Europe-wide agreement supported by the Council of Europe, became effective from 1st March 2004 and is the first international treaty specifically on landscape. It aims to promote co-operation on improved approaches to the planning, management and protection of landscapes throughout Europe. The ELC came into force in the UK on 1 March 2007.

5.3 The ELC adopts a broad definition of landscape: *'landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors'.* Article 2 of the ELC states that: '*this Convention... covers natural, rural, urban and peri-urban areas. It includes land, inland water and marine areas. It concerns landscapes that might be considered outstanding as well as everyday or degraded landscapes*.'

### National Planning Policy Framework

5.4 The Government's current planning policies on land use planning in England are set out in the National Planning Policy Framework[1] (NPPF). The following NPPF policies are relevant to consideration of landscape matters:

- Policy 7 – Requiring good design
- Policy 11 – Conserving and enhancing the natural environment

### Local planning policy

5.5 The Site falls partly within two local planning authority areas within North Kent: Dartford Borough and Gravesham Borough. In addition, the study area includes land that falls in Thurrock Borough within South Essex. The following local planning policy documents are applicable to the study area. Planning designations are shown on figure 2.1).

[1] National Planning Policy Framework (March 2012, DCLG)

- Dartford Local Plan Core Strategy, Adopted September 2011
- Dartford Local Plan 1995 : Saved Policies Following Adoption of the Core Strategy, September 2011 (which will be replaced by the Development Management DPD Policies).
- Gravesham Local Plan Core Strategy, adopted September 2014
- Thurrock Core Strategy and Policies for Management of Development DPD, Adopted December 2011

5.6 A review of the above documents has identified the following planning policy issues of relevance to consideration of landscape matters:

***Environmental improvement of derelict and despoiled landscapes***

- Policy DL1 – Encouragement of restoration schemes (Dartford Local Plan 1995 Saved Policies)

***Protection and enhancement of the countryside***

- Policy C5 – Enhancement of the environmental quality and recreational value of the countryside (Dartford Local Plan 1995 Saved Policies)

***Landscape design for new development***

- Policy B3 – Landscaping within new development (Dartford Local Plan 1995 Saved Policies)
- Policy CS19 – Development and Design Principles (Gravesham Core Strategy)

***Green grid/green infrastructure provision for priority development areas***

- Policy CS4 – Ebbsfleet to Stone Priority Area (Dartford Core Strategy)
- Policy CS5 – Ebbsfleet Valley Strategic Site (Dartford Core Strategy)
- Policy CS6 – Thames Waterfront (Dartford Core Strategy)
- Policy CS14 – Green Space (Dartford Core Strategy)
- Policy CS03 – Northfleet Embankment and Swanscombe Peninsula East Opportunity Area (Gravesham Core Strategy)

- Policy CS06 – Ebbsfleet (Gravesham) Opportunity Area (Gravesham Core Strategy)
- Policy CS12 – Green Infrastructure (Gravesham Core Strategy)

***Maintaining and enhancing views of the River Thames landscape***

- Policy CSTP28 – River Thames (Thurrock Core Strategy)

**Best practice guidelines**

***Guidelines for Landscape and Visual Impact Assessment[2]***

*5.7* *Guidelines for Landscape and Visual Impact Assessment,* produced by the Landscape Institute and the Institute for Environmental Management and Assessment in 2013 (3rd Edition), is widely acknowledged as providing good practice guidance for assessing the potential impacts of development on landscape character and views in the UK.

5.8 The Guidelines for Landscape and Visual Impact Assessment should also be read in conjunction with the Landscape Institute's *Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment*[3], which provide advice to the landscape professional on photography and photomontage methods in landscape and visual impact assessment.

***Landscape Character Assessment Guidance for England and Scotland[4]***

*5.9* *Landscape Character Assessment Guidance for England and Scotland,* produced by the Countryside Agency and Scottish Natural Heritage in 2002, is widely acknowledged as providing good practice guidance for assessing landscape character in England and Scotland.

**Relevant designations**

5.10 There are no designated landscapes within the site study area. The site is located within an area long established as a priority for regeneration and zone of change within national and local planning policies, and is excluded from the Green Belt. Relevant designations are shown on figures 2.1 and 5.2.

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[2] Guidelines for Landscape and Visual Impact Assessment (The Landscape Institute and the Institute for Environmental Management and Assessment, 3rd Edition, 2013)

[3] Advice Note 01/11 Photography and Photomontage in Landscape and Visual Impact Assessment (The Landscape Institute, 2011)

[4] Landscape Character Assessment Guidance for England and Scotland (The Countryside Agency and Scottish Natural Heritage, 2002)

5.11 The nearest designated landscape is the North Downs Area of Outstanding Natural Beauty, located approximately 10-15km to the south of the study area.

5.12 Swanscombe Heritage Park is located to the south of London Road (A226) to the south of the Site.

## BASELINE STUDIES

### The site

5.13 The Site is located on the southern bank of the River Thames within North Kent to the east of London. The northern part of the Site includes land on Swanscombe Peninsula, and the southern part of the Site includes land within Ebbsfleet Valley extending to the A2. The key landscape and visual characteristics of the Site that have been identified as part of scoping studies are summarised below:

***Swanscombe Peninsula***

- Swanscombe Peninsula is one of the largest areas of open space along the low-lying riverside land on either bank of the River Thames between the QEII Bridge and Tilbury/Gravesend. The Peninsula has a long industrial history and the area is partially a brownfield site comprising previously developed land.

- Current land uses include extensive areas of marsh and grassland, semi-mature woodland and scrub, grassed embankments/flood defences and some industrial premises, with public access limited to a small number of public footpaths (Nos. DS1, DS2, DS12 and NU1).

- There are few internal boundaries or features, although localised earthworks exist which are a result of tipping activities and the High Speed 1 Rail Link works.

- The Peninsula is predominantly a medium to large scale landscape with a generally open and windswept character. The skyline is dominated by overhead power lines and pylons in many views, including the 190m high 'superpylon' which is a visually prominent landmark in many views of the site

- The northern part of the Peninsula comprises Broadness Salt Marsh (around 1–2m AOD), which has been used for the tipping of pulverised fuel ash and restored to grassland.

- The central area of the Peninsula comprises landfill areas that have been artificially raised to around 6-13m AOD where tipping of pulverised fuel ash has occurred.

- To the east of the central area, Botany Marshes (around 1–2m AOD) is an extensive flat expanse of grazing marsh which provides a marked contrast to the adjacent industrialised landscapes of Tower Wharf along the eastern riverfront of the Peninsula and the Manor Way Industrial Estate to the south.

- The southwest part of the Peninsula adjacent to the Ingress Park residential area is dominated by the flat expanse of Black Duck Marshes (aka Swanscombe Marshes), which is around 1–2m AOD and extends to the riverfront.

- The southern part of Swanscombe Peninsula west of the High Speed 1 Rail Link is the site of the former Swanscombe cement works, which is now occupied by the Manor Way Industrial Estate and associated road infrastructure.

- Wide open views exist from the public footpaths on Swanscombe Peninsula across the River Thames to the north towards West Thurrock, South Stifford and Grays. The QEII Bridge is a prominent landmark in views of the riverscape upstream from the peninsula.

- Views from adjacent residential areas in Ingress Park across the open marshes on Swanscombe Peninsula are largely contained by mature screening vegetation.

- Views across the open marshes on Swanscombe Peninsula south towards the residential areas in Greenhithe/Swanscombe are largely contained by the rising chalk cliff and screening vegetation.

***Ebbsfleet Valley***

- The River Ebbsfleet flows a short distance from Springhead to the River Thames. The legibility of the valley is hampered by major roads - the A2/Channel Tunnel Rail Link (CTRL) to the south and the North Kent Railway to the north slice across the valley - while the natural connection to the River Thames has long been buried in culverts under the roads and industry of West Northfleet.

- The Ebbsfleet Valley has undergone a major transformation as a result of the High Speed 1 railway and the Ebbsfleet International Station, with associated new roads, railways, extensive car parks, landscaping and security fencing.

- There is a secluded sequence of wetlands along the narrow river floodplain, where lines of mature trees mark the meanders of the stream and the wetlands widen at intervals to form reed-beds. The river floodplain is often hidden between slip-roads and behind embankments, and provides an attractive, natural contrast to the engineered feel of highways landscaping.

- Ebbsfleet Valley has an exceptionally rich archaeological heritage, with sites from every period of human occupation. The River Ebbsfleet cuts through the underlying

chalk bedrock, and a combination of easy access to chalk and flint outcrops and the confluence of two rivers would have provided an attractive environment for early human occupation.

- Quarrying activities has continued over the centuries, leading to the industrial development which has shaped the identity of the Ebbsfleet Valley. The odd landforms on the valley sides are the legacy of quarries and land-fill and the dramatic chalk cliffs at Blue Lake and alongside many roads indicate the scale of past operations.

**The study area**

5.14 South of the River Thames, the proposed study area for the assessment of baseline landscape conditions extends from Dartford and the Darent Valley in the west to Gravesend in the east, and includes the rural landscapes south of the A2 (figure 5.1). To the north of the River Thames, the study area extends from Aveley Marshes and Purfleet in the west to Tilbury and West Tilbury Marshes in the east, and includes the urban landscapes of West Thurrock/South Stifford/Grays/Chadwell St Mary south of the A13.

5.15 The general character of the study area is strongly influenced by the complex inter-relationship of urbanised landscapes (or townscapes) dominated by the built environment, disturbed and despoiled landscapes (the legacy of extensive mineral extraction) and urban fringe semi-rural/rural farmed landscapes, and the distinctive riverscape of the River Thames.

5.16 The River Thames riverscape within the study area is characterised by a patchwork of riverside urban townscapes and industrialised landscapes, interspersed by remnants of marshland with a semi-rural character. The River Thames has a distinctive working character, as evidenced by the range of land uses along its banks including large scale heavy industrial complexes, container ports, recent commercial and office development, and pockets of residential development. Single land uses often occupy large blocks of land giving rise to a coarse urban grain in many areas.

5.17 The geology of the study area has also had a distinct influence on the landscape, with many areas bearing the physical and cultural marks of chalk extraction for the production of cement. Throughout the study area, there are significant areas where the character is currently changing at a rapid rate as land uses and economies re-structure.

5.18 The key landscape and visual characteristics of the study area that have been identified as part of scoping studies are summarised below:

***South of the River Thames***

- The landscapes to the south of the River Thames between the M25 and Gravesend are a fragmented and disjointed patchwork of large-scale heavy industry and

commercial land uses, residential areas, transport infrastructure and minerals workings, interspersed by areas of open land of varied size and character. The skylines are typically dominated by pylons and overhead transmission lines.

- To the west of Swanscombe Peninsula, the low-lying riverside land includes the recently developed Ingress Park residential area centred around the restored Ingress Abbey and parkland, which comprises predominately two, three, four and five storey buildings, in a mixture of brown/red brick, smooth render, natural and reconstituted stone.

- Further west, the Crossways Business Park, comprising of a range of large, low-rise warehouses and offices, dominates the riverfront immediately downstream of the QEII Bridge linking Kent and Essex spans high above the Thames, which is the most prominent feature of the riverscape in views from the riverfront.

- To the east of Swanscombe Peninsula, the low-lying riverside land downstream to Gravesend is dominated by large-scale industrial buildings and chimneys around Tower Wharf with associated river transport infrastructure, including nine deep water cargo terminals. Further east, the industrial area gives way to a retail park with superstores and then a residential area of large Georgian villas and terraces comprising two/three storey buildings in red brick to the west of Gravesend town centre on the riverside.

- Immediately south of the low-lying riverside landscapes, the A226 (London Road) and the North Kent Railway Line run along the top of a chalk cliff which resulted from extensive chalk quarrying, and these transport corridors mark the transition to the densely urbanised townscapes of Stone, Greenhithe and Swanscombe on the higher ground.

- The character of these townscapes is strongly influenced by adjacent industrial and transport infrastructure land uses, which results in a somewhat fragmented and relatively low quality built environment in many places.

- Swanscombe lies around 20-35m AOD above Swanscombe Peninsula, and includes residential properties, shops, public houses and light industrial units which are all predominately two and three storey buildings in red brick. Greenhithe to the west has a similar settlement character to Swanscombe.

- The built environment is interspersed by green spaces and corridors of varying sizes - including the Swanscombe Heritage Park (a large public open space with a mosaic of secondary woodland, scrub and grassland between Greenhithe and Swanscombe) and Craylands Gorge (a dramatic former tramway linking Eastern Quarry with the former Swanscombe cement works, which runs along the floor of a spectacular narrow man-made gorge cut deep into the chalk bedrock with precipitous slopes cloaked in dense scrub and woodland).

- The landscape in the area has been transformed by urbanisation, quarrying and industrial development, which has shaped the identity of the landscape over the centuries. The distinctive landforms in and around the Ebbsfleet Valley, such as the dramatic and extensive area of disused chalk pits between the urban areas of Greenhithe/Swanscombe and the A2, and the chalk cliffs at Blue Lake and alongside many roads in the area, are the legacy of quarries and landfill.

- To the west of the area, a former chalk quarry has been transformed by the development of the substantial and distinctive form of the Bluewater Retail Park development opened in 1999.

***North of the River Thames***

- The riverside landscapes on the northern bank of the River Thames from the Queen Elizabeth II Bridge (QEII Bridge) downstream to Tilbury Docks are also very fragmented and disjointed, with heavy industry juxtaposed with residential development and areas of open land.

- Aveley Marshes and West Thurrock Marshes (marked by Stone Ness), and the areas of open wasteland around adjacent industrial complexes, give the riverscape a semi-rural character which creates a sense of openness along the river.

- East of West Thurrock Marshes, there is a large oil refinery and cement works associated with the Vopak Terminal. This area is generally very fragmented with large scale buildings and industrial complexes interspersed with areas of wasteland, depot areas and remnant marshland.

- Two super-size pylons, one on either side of the river at West Thurrock Marshes and Swanscombe Peninsula, are dominant vertical features in the riverscape.

- In contrast to the adjacent riverside industrial buildings and structures, the former industrial areas along the Grays riverfront have been redeveloped to create an extensive residential development consisting of four-storey blocks that, together with the marina and the Grays Beach riverside park, gives life and activity to the riverfront.

- Built on former marshland, Tilbury Docks (the main container port for London) dominates the northern bank east of Greys with its extensive water berths, vast warehouses, stacks of multi-coloured containers and travelling cranes, and car and van depots.

- Other notable landmarks along the riverfront include the Tilbury Bulk Grain Terminal and the London International Cruise Terminal.

- Public Footpaths numbers 141, 170, 171 and 177 run along the flood defence

embankment, providing long distance views across the river towards Swanscombe Peninsula.

**Published baseline studies**

5.19 The following published studies, plans and strategies are applicable to the understanding, planning and management of landscapes within the study area, and will be considered by the baseline assessment:

***National Character Areas***

5.20 The following broadly defined National Character Areas identified by Natural England fall within the study area:

- National Character Area (81) – Greater Thames Estuary[5]
- National Character Area (111) – Northern Thames Basin[6]
- National Character Area (113) – North Kent Plain[7]

***Thames Gateway Historic Environment Characterisation Project***

5.21 A high-level characterisation of the historic environment within the study area is provided by the Thames Gateway Historic Environment Characterisation Project[8]. The study identifies and describes Historic Landscape Character Areas, Urban Character Areas and Archaeological Context Areas that have been combined to create Historic Environment Character Areas, which provide a broad assessment of the historic character (or time depth) of the study area's landscapes.

***Kent Landscape Character Assessment***

5.22 The *Kent Landscape Character Assessment*[9] identifies the following broadly defined Landscape Character Areas within the study area:

[5] NCA Profile: 81 Greater Thames Estuary (Natural England, 2013) http://www.naturalengland.org.uk/publications/nca/greater_thames_estuary.aspx
[6] NCA Profile: 111 Northern Thames Basin (Natural England, 2013) http://www.naturalengland.org.uk/publications/nca/northern_thames_basin.aspx
[7] NCA Profile: 113 North Kent Plain (Natural England, 2012) http://www.naturalengland.org.uk/publications/nca/north_kent_plain.aspx
[8] Thames Gateway Historic Environment Characterisation Project (Chris Blandford Associates for English Heritage, 2004)
[9] The Landscape Assessment of Kent (Jacobs Babtie for Kent County Council, 2004) https://shareweb.kent.gov.uk/Documents/environment-and-planning/Wildlife%20and%20landscapes/Landscape%20Assessment%20of%20Kent%20October%202004.pdf

- Western Thames Marshes
- Dartford and Gravesend Fringes
- Darenth Downs
- Lower Darent Valley
- Southfleet Arable Lands
- Hoo Peninsula
- Eastern Thames Marshes

***Gravesham Landscape Character Assessment***

5.23 The *Gravesham Landscape Character Assessment*[10] identifies the following Landscape Character Areas for the urban fringes and rural area of Gravesham within the study area:

- Botany Marshes
- Gravesend Southern Fringe
- Istead Arable Farmlands
- Shorne and Higham Marshes
- Higham Arable Farmland

***Gravesham Townscape Appraisal***

5.24 The *Gravesham Townscape Appraisal*[11] identifies the following Urban Character Areas within the study area:

- 1 – Historic Town Centre Core
- 2 – Industrial Hinterland

[10] Gravesham Landscape Character Assessment (Jacobs for Gravesham Borough Council, 2009) http://docs.gravesham.gov.uk/WebDocs/Environment%20and%20Planning/LDF/Landscape_Character_Assessment_May_2009.pdf

[11] Gravesham Townscape Appraisal (Jacobs for Gravesham Borough Council, 2008) http://docs.gravesham.gov.uk/webdocs/Environment%20and%20Planning/GLP/HER-02_Gravesham_Townscape_Appraisal_June_2008.pdf

- 3 – Victorian/Edwardian Suburbs
- 4 – Inter/Post War Suburbs
- 5 – Modern Suburbs
- 6 – Northfleet

***Thurrock Landscape Capacity Study***

5.25 The *Thurrock Landscape Capacity Assessment*[12] identifies the following Landscape Character Areas within the study area:

- C5 - Tilbury Marshes
- D1 - Aveley/South Ockendeon Urban Fringe
- D2 - Mar Dyke River Valley Urban Fringe
- D3 - North Stifford Corridor Urban Fringe
- D4 - White Crofts/Orsett Heath Urban Fringe
- D5 - Linford/Buckingham Hill Urban Fringe
- D6 - Chadwell Escarpment Urban Fringe
- D7 - West Tilbury Urban Fringe
- E1 - Aveley Urban Area
- E2 - South Ockendon Urban Area
- E3 - West Thurrock and Purfleet Urban Area
- E4 - Grays/ Chadwell St Mary Urban Area
- E5 - Tilbury and Docks Urban Area

***Thurrock Urban Character Study***

[12] Thurrock Landscape Capacity Study (Chris Blandford Associates for Thurrock Council, 2005) https://www.thurrock.gov.uk/sites/default/files/assets/documents/ldf_tech_landscape.pdf

5.26 The *Thurrock Urban Character Study*[13] provides detailed character appraisals for the urban areas and villages within the Thurrock part of the study area, identifying the distinctive townscape character types and character areas of each settlement.

***Thames Strategy East***

5.27 The *Thames Strategy East*[14] identifies the following Reaches for the River Thames corridor within the study area:

- Reach 6 - Erith Reach (Rainham Marshes/Erith)
- Reach 7 – Long Reach and Fiddlers Reach (Purfleet/Greenhithe/Grays/ Swanscombe Peninsula)
- Reach 8 - Northfleet Hope Reach (Tilbury Docks & Northfleet)
- Reach 9 – Gravesend Reach (Gravesend & Tilbury)

5.28 For each Reach, the *Thames Strategy East* identifies specific Landscape Character Types (such as 'high rise residential and institutions', 'industry', 'semi-natural greenspace' or 'recreational greenspace' for example).

5.29 In addition, the *Thames Strategy East* also provides a landscape-led vision and strategic guidance related to the management of the River Thames corridor's biodiversity, historic and cultural resources.

***Green Grid Strategies***

5.30 The *Ebbsfleet Valley and A2 Corridor Green Cluster Study*[15] sets out a vision and action plan to support delivery of a network of multi-functional green spaces (known as the Green Grid) in conjunction with future development in this part of Kent Thameside. The *Ebbsfleet Valley and A2 Corridor Green Cluster Study* identifies the following Green Grid projects within the study area:

- Swanscombe Peninsula (Black Duck Marsh, Botany Marshes and riverside public access and habitat enhancements)
- Swanscombe Heritage Park & Craylands Gorge (existing public open space enhancement)

[13] Recognising Sense of Place : Thurrock Urban Character Study (Chris Blandford Associates for Thurrock Council, 2007)
[14] Thames Strategy East (Thames Estuary Partnership, 2008) http://thamesweb.com/projects-introduction/79-projects/main-projects/71-thames-strategy-east
[15] Green Cluster Studies: Ebbsfleet Valley and A2 Corridor Technical Report (Greening the Gateway Kent and Medway Partnership, March 2008)

- Ebbsfleet Valley West and East (new public open spaces, green grid links and habitat creation)
- Northfleet Embankment (new riverside promenade providing open space, footpaths and cycleways along waterfront)
- Blue Lake (new public open space and water-based recreation/leisure destination)
- Northfleet Urban Country Park/Springhead Linear Park (existing public open space enhancement and new linear park)
- A2 Linear Park (new 24ha multi-functional outdoor activity park)

5.31 The *Kent Thameside Green Grid Design Strategy and Guidelines*[16] provides strategic guidance for landscape character areas within the study area that is of relevance to the above Green Grid projects.

## CONSULTATIONS UNDERTAKEN TO DATE

### Natural England

5.32 Natural England's letter dated 4th November 2013 provided initial advice on the scope of the EIA. Natural England advises that a full assessment of the potential impacts of the development on local landscape character and views should be undertaken using methodologies based on the good practice guidance set out in *Guidelines for Landscape and Visual Impact Assessment* produced by the Landscape Institute and the Institute for Environmental Management and Assessment in 2013 (3rd Edition). The agency goes on to advise that the assessment should:

- Refer to the relevant National Character Areas and local Landscape Character Assessments.
- Map local landscape character areas at a scale appropriate to the development site.
- Include consideration of any relevant [landscape] management plans or strategies pertaining to the area.
- Assess visual effects on the surrounding area and landscape.
- Assess physical effects of the development, such as changes in topography.
- Include details of alternative site layouts considered, together with justification of the selected option in terms of landscape impact and benefit.

[16] Kent Thameside Green Grid Design Strategy and Guidelines (LDA for Kent County Council, June 2004)

- Assess the cumulative landscape and visual effects of the development with other relevant existing or proposed development in the area.

**English Heritage**

5.33 English Heritage's letter dated 5th November 2013 provided initial advice on the scope of the EIA. English Heritage advises that assessment of the potential visual impacts of the development on the setting of the following heritage assets close to the Site should be undertaken:

- The grade II listed lighthouse and war memorial structures located within the former Dartford cement works
- The grade II listed Factory Club building
- The grade I listed parish church and other listed buildings that represent the core of the historic settlement at Northfleet (also a Conservation Area)
- The grade II* listed church at Swancombe (All Saints)
- The listed house on Knockhall Road
- The two listed structures associated with the historic landscape at Ingress Park

**Kent County Council**

5.34 Kent County Council's letter dated 7th November 2013 provided initial advice on the scope of the EIA. Kent County Council's Heritage Team advises that assessment of the potential visual impacts of the development on the setting of the following heritage assets should be undertaken:

- The listed church of All Saints, Galley Hill
- The listed St Peter and Paul, Swanscombe
- The listed Ingress Abbey

## OUTLINE ASSESSMENT METHODOLOGY

### General Approach

5.35 The assessment methodology will broadly follow the best practice principles for assessing landscape and visual effects recommended by the *Guidelines for Landscape and Visual Impact Assessment*, taking into account the *Landscape Character Assessment Guidance for England and Scotland*.

5.36 In accordance with the GLVIA, the following distinct but related assessments will be undertaken:

- **Assessment of landscape effects** – assessing effects of the proposed development on landscape as a resource (i.e. changes to physical elements/features of the landscape and/or the aesthetic, perceptual and experiential characteristics that make different landscapes distinctive).

- **Assessment of visual effects** – assessing effects of the proposed development on the views available to people and their visual amenity, and on the setting of heritage assets (i.e. changes in the context and character of views as a result of the change or loss of existing elements of the landscape and/or the introduction of new elements).

5.37 The assessment will involve the following key steps:

- **Baseline studies** – establishing the existing baseline landscape and visual conditions within the study area against which the effects of the proposed development will be assessed.

- **Identification and description of effects** – systematically assessing the likely landscape and visual effects of the proposed development, including whether they are adverse or beneficial.

- **Assessing the significance of effects** – systematically assessing the likely significance of the landscape and visual effects identified.

- **Mitigation** – identifying proposals for measures designed to avoid/prevent, reduce or offset (or compensate for) any significant negative (adverse) effects identified.

**Baseline studies**

***Landscape Character Assessment***

5.38 The character, sensitivity and quality of the landscape within the study area will be assessed to provide a baseline against which the effects of the proposed development can be assessed. The LVIA will adopt the broad and inclusive ELC definition of landscape embracing townscapes and riverscapes, as well as all forms of rural landscape.

5.39 The character of the landscape within the study area will be assessed by reference to the relevant National Character Areas and local Landscape Character Assessments as appropriate. Local Landscape Character Areas within the study area will be identified, mapped and described at a scale appropriate to the development site.

***Landscape Sensitivity Assessment***

5.40 Assessing the sensitivity of landscape receptors combines judgements of their susceptibility to the type of change or development proposed and the value attached to the landscape.

5.41 A set of landscape sensitivity definitions and assessment criteria have been developed specifically for this assessment. These are based on examples provided in the GLVIA guidelines, and have subsequently been modified for the purposes of undertaking this assessment. The proposed criteria to be used to assess the sensitivity of various types of landscape are set out in **Table 5.1** below.

**Table 5.1: Landscape Sensitivity Criteria**

| Landscape Sensitivity | Landscape Resources |
|---|---|
| **High Sensitivity** | A landscape of particularly distinctive character or highly valued for its scenic or cultural quality, which is susceptible to relatively small changes. |
| **Medium Sensitivity** | A landscape that is at least of medium value and medium quality and is reasonably tolerant of change. |
| **Low Sensitivity** | A low value landscape of low or medium quality, which is tolerant of substantial change. |

***Landscape Quality Assessment***

5.42 A set of landscape quality definitions and assessment criteria have been developed for this assessment. These are based on examples provided in the GLVIA guidelines, and have subsequently been modified for the purposes of undertaking this assessment. The

proposed landscape quality classification follows a five point scale as set out in **Table 5.2** below.

**Table 5.2: Landscape Quality Criteria**

| Landscape Quality | Definition |
|---|---|
| **Very High** | Landscapes which have a particularly high quality, by nature of their condition, high scenic qualities, strong characteristics, cultural associations, and/or relative position and amenity. These are likely to be, but not necessarily, within a World Heritage Site, National Park or Area of Outstanding Natural Beauty. |
| **High** | Landscapes which are considered to be of high quality by virtue of their positive characteristics, sense of place or local or cultural associations. These areas would be of regional or local importance and are likely to be, but not necessarily, designated by the planning authority as being of landscape value. i.e. Conservation Area or Area of High Landscape Value. |
| **Medium** | Landscapes which retain a positive character and a sense of place and/or are of local interest or have local cultural associations. These areas are unlikely to be designated for their landscape value. |
| **Low** | Landscapes in fair to poor condition which have undergone change to the extent that they no longer have a distinctive local character, or particular aesthetic quality or they lack cultural associations. |
| **Very Low** | Degraded landscapes in poor condition whose distinctive character and aesthetic quality has been seriously damaged. |

***Visual Assessment***

5.43 Zone of Theoretical Visibility (ZTV) mapping has been undertaken using digital contour information to identify land that, theoretically, is visually connected with the Site on Swanscombe Peninsula. The ZTV was checked by site survey in October 2014 to confirm the extent of visibility taking into account the screening effects of buildings, other structures and blocks of woodland/other areas of substantial vegetation.

5.44 Based on the ZTV and a review of visual receptors in the study area, potential viewpoint locations from which views of the Site may be possible are set out in **Table 5.3** and shown on the Study Area and Potential Viewpoints plan (figure 5.1). In accordance with

good practice, the proposed viewpoints (and photomontage requirements) for the assessment will be agreed with Dartford Borough Council, Gravesham Borough Council and Thurrock Council as appropriate, and kept under review as the scheme develops.

**Table 5.3: Potential Assessment Viewpoints**

| Potential Viewpoints | Visual Receptors | Nature of View(s) | Local Planning Authority |
|---|---|---|---|
| 1. West Thurrock Thames Path | • Recreational Users | • Type of View(s): views across River Thames from riverside public footpath along the flood defence embankment<br>• Direction of View(s): looking south-east towards Swanscombe Peninsula<br>• Distance from Site: c.1.5 km | • Thurrock |
| 2. South Stifford Thames Path | • Recreational Users | • Type of View(s): views across River Thames from riverside public footpath along the flood defence embankment<br>• Direction of View(s): looking south towards Swanscombe Peninsula<br>• Distance from Site: c.1.5 km | • Thurrock |
| 3. Grays High Rise Flats - West | • Residents | • Type of View(s): elevated views from high rise residential properties across River Thames<br>• Direction of View(s): looking south-west towards Swanscombe Peninsula<br>• Distance from Site: c.1.5 km | • Thurrock |
| 4. Grays High Rise Flats - East | • Residents | • Type of View(s): elevated views from high rise residential properties across River Thames<br>• Direction of View(s): looking south-west towards Swanscombe Peninsula<br>• Distance from Site: c.1.5 km | • Thurrock |
| 5. Grays Beach Riverside Park | • Recreational Users | • Type of View(s): views across River Thames from riverside park and public footpath along the flood defence embankment<br>• Direction of View(s): looking south-west towards Swanscombe Peninsula<br>• Distance from Site: c.1.5 km | • Thurrock |
| 6. Gateway | • Students | • Type of View(s): views across | • Thurrock |

| Potential Viewpoints | Visual Receptors | Nature of View(s) | Local Planning Authority |
|---|---|---|---|
| Academy | | Tilbury Marshes from environs of school<br>• Direction of View(s): looking south-west towards Swanscombe Peninsula<br>• Distance from Site: c.4 km | |
| 7. West Tilbury Marshes | • Recreational Users | • Type of View(s): views from designated access land<br>• Direction of View(s): looking west towards Swanscombe Peninsula<br>• Distance from Site: c.4 km | • Thurrock |
| 8. Tilbury Fort | • Recreational Users<br>• Scheduled Monument<br>• Listed Buildings | • Type of View(s): views along River Thames from riverside public footpath/cycleway and designated heritage asset<br>• Direction of View(s): looking west towards Swanscombe Peninsula<br>• Distance from Site: c.4 km | • Thurrock |
| 9. London International Cruise Terminal | • Cruise Liner Passengers | • Type of View(s): vistas along River Thames and waterfronts from riverfront<br>• Direction of View(s): looking west towards Swanscombe Peninsula<br>• Distance from Site: c.3.5 km | • Thurrock |
| 10. QEII M25 Thames Bridge Crossing | • Drivers/ Passengers in Vehicles | • Type of View(s): elevated panoramas/vistas from public highway over the River Thames<br>• Direction of View(s): looking east over the River Thames towards Swanscombe Peninsula<br>• Distance from Site: c.3 km | • Thurrock<br>• Dartford |
| 11. Gravesend/ Tilbury Pedestrian Ferry | • Ferry Passengers | • Type of View(s): vistas along River Thames and Northfleet waterfront<br>• Direction of View(s): looking upstream towards Swanscombe Peninsula<br>• Distance from Site: c.3.5 km | • Thurrock<br>• Gravesham |
| 12. Stone/Charles Park (Thames Path) | • Recreational Users | • Type of View(s): views from riverside public footpath along the flood defence embankment<br>• Direction of View(s): looking | • Dartford |

| Potential Viewpoints | Visual Receptors | Nature of View(s) | Local Planning Authority |
|---|---|---|---|
| | | north-east towards Swanscombe Peninsula<br>• Distance from Site: c.2 km | |
| 13. Greenhithe Riverfront (Thames Path) | • Recreational Users<br>• Residents<br>• Conservation Area | • Type of View(s): views along River Thames<br>• Direction of View(s): looking north-east towards Swanscombe Peninsula<br>• Distance from Site: c.1 km | • Dartford |
| 14. Ingress Abbey | • Residents | • Type of View(s): glimpsed view across Ingress Park residential area<br>• Direction of View(s): looking north-east towards Swanscombe Peninsula<br>• Distance from Site: c.0.5 km | • Dartford |
| 15. Ingress Park | • Listed Building | • Type of View(s): extensive views from high rise flats over Black Duck Marsh<br>• Direction of View(s): looking east towards Swanscombe Peninsula<br>• Distance from Site: c.0.1-0.5 km | • Dartford |
| 16. 1 Knockhall Road | • Listed Building | • Type of View(s): glimpsed view<br>• Direction of View(s): looking north-east towards Swanscombe Peninsula<br>• Distance from Site: c.0.5 km | • Dartford |
| 17. Swanscombe Heritage Park | • Recreational Users | • Type of View(s): view from public open space<br>• Direction of View(s): looking north towards Swanscombe Peninsula<br>• Distance from Site: c.1 km | • Dartford |
| 18. Swanscombe (Leonard Avenue) | • Residents | • Type of View(s): glimpsed views from residential properties<br>• Direction of View(s): looking north towards Swanscombe Peninsula and east towards Ebbsfleet Valley<br>• Distance from Site: c.1-1.5 km | • Dartford |
| 19. St Peter & St Paul Church, Swanscombe | • Listed Building | • Type of View(s): glimpsed view across residential areas<br>• Direction of View(s): looking | • Dartford |

| Potential Viewpoints | Visual Receptors | Nature of View(s) | Local Planning Authority |
|---|---|---|---|
| | | north towards Swanscombe Peninsula<br>• Distance from Site: c. 1-1.5 km | |
| 20. All Saints Church, Swanscombe | • Listed Building | • Type of View(s): glimpsed view<br>• Direction of View(s): looking north towards Swanscombe Peninsula<br>• Distance from Site: c. 0.5 km | • Dartford |
| 21. Swanscombe Peninsula Public Footpath | • Recreational Users | • Type of View(s): views from public footpath<br>• Direction of View(s): looking south-east across Swanscombe Peninsula<br>• Distance from Site: c.0.1 km | • Dartford |
| 22. Swanscombe Peninsula Public Footpath | • Recreational Users | • Type of View(s): views from public footpath<br>• Direction of View(s): looking south-west across Swanscombe Peninsula<br>• Distance from Site: c.0.1 km | • Dartford |
| 23. Swanscombe Peninsula Public Footpath | • Recreational Users | • Type of View(s): views from public footpath<br>• Direction of View(s): looking east across Swanscombe Peninsula<br>• Distance from Site: c.0.1 km | • Gravesham |
| 24. The Factory Club | • Listed Building | • Type of View(s): glimpsed view<br>• Direction of View(s): looking north-west towards Swanscombe Peninsula<br>• Distance from Site: c. 1-1.5 km | • Gravesham |
| 25. Northfleet Lighthouse/ Bevan's War Memorial | • Listed Building<br>• Recreational Users | • Type of View(s): views from riverside public footpath<br>• Direction of View(s): looking west towards Swanscombe Peninsula<br>• Distance from Site: c.1.5-2 km | • Gravesham |
| 26. Northfleet Conservation Area | • Listed Buildings<br>• Conservation Area | • Type of View(s): glimpsed views<br>• Direction of View(s): looking north-west towards Swanscombe Peninsula<br>• Distance from Site: c.2 km | • Gravesham |
| 27. A2260 Bridge over High Speed 1 | • Pedestrians<br>• Drivers/ Passengers in | • Type of View(s): elevated views along Ebbsfleet Valley<br>• Direction of View(s): looking | • Gravesham |

| Potential Viewpoints | Visual Receptors | Nature of View(s) | Local Planning Authority |
|---|---|---|---|
| Railway | Vehicles | north across Ebbsfleet Valley<br>• Distance from Site: within Site | |
| 28. Gravesend Riverfront | • Recreational Users | • Type of View(s): views along River Thames from public realm on waterfront<br>• Direction of View(s): looking west towards Swanscombe Peninsula<br>• Distance from Site: c.3.5 km | • Gravesham |
| 29. Gravesend (Kings Farm) | • Residents | • Type of View(s): glimpsed views from residential properties<br>• Direction of View(s): looking north-west towards Swanscombe Peninsula<br>• Distance from Site: c.5.5 km | • Gravesham |

## ASSESSMENT OF SIGNIFIANCE CRITERIA

5.45 The significance of the potential effects of the development on the landscape and visual resource will be assessed in relation to the baseline conditions. In assessing the effects of the development, the GLVIA guidelines recommend that thresholds of significance are established, taking into account the sensitivity of the landscape or visual resource and the magnitude of change in the baseline conditions (i.e. 'effect') resulting from the development proposals. The assessment of significance of landscape and visual effects will be based upon common sense, experience and reasoned judgement, substantiated and supported by objective evidence as far as possible.

### Assessment of Landscape Effects

5.46 The proposed criteria for assessing the significance of landscape effects are set out in **Table 5.4**.

**Table 5.4: Thresholds of Significance for Landscape Effects**

| Significance | Definition |
|---|---|
| **Major Adverse** | The Proposed Development would result in effects that:<br>• are at a considerable variance with the scale and pattern of the landscape and would degrade the integrity of the area<br>• would permanently degrade, diminish or destroy the integrity of valued/characteristic landscape features, elements and/or their setting<br>• would cause a very high quality landscape to be permanently changed and its condition diminished |
| **Moderate Adverse** | The Proposed Development would result in effects that:<br>• are out of scale with the landscape or at odds with the local pattern<br>• would have an adverse effect on a landscape of high quality |
| **Minor Adverse** | The Proposed Development would result in effects that:<br>• do not quite fit into the scale and pattern of the landscape<br>• adversely affect the quality of the landscape |
| **Neutral** | The Proposed Development would result in no discernible adverse or beneficial landscape effects. |
| **Minor Beneficial** | The Proposed Development would result in effects that:<br>• generally fit with the scale and pattern of the landscape<br>• provide minor positive enhancements of landscape quality/condition |
| **Moderate Beneficial** | The Proposed Development would result in effects that:<br>• fit well with the scale and pattern of the landscape<br>• provide moderate positive enhancements of landscape quality/condition |
| **Major Beneficial** | The Proposed Development would result in effects that:<br>• fit very well with the scale and pattern of the landscape<br>• provide major positive enhancements of landscape quality/condition |

5.47 For the purposes of the assessment, major or moderate landscape effects (adverse or beneficial) that are permanent are deemed to be significant.

**Assessment of Visual Effects**

5.48 The proposed criteria for assessing the significance of visual effects on sensitive receptors are set out in **Table 5.5**.

**Table 5.5: Thresholds of Significance for Visual Effects**

| Significance | Visual Effect |
|---|---|
| **Substantial Adverse** | The Proposed Development would cause a substantial deterioration in the existing view for a sensitive visual receptor |
| **Moderate Adverse** | The Proposed Development would cause a moderate deterioration in the existing view for a sensitive visual receptor |
| **Slight Adverse** | The Proposed Development would cause a slight deterioration in the existing view for a sensitive visual receptor |
| **Neutral** | No discernible deterioration or improvement in the existing view for a sensitive visual receptor |
| **Slight Beneficial** | The Proposed Development would cause a slight improvement in the existing view for a sensitive visual receptor |
| **Moderate Beneficial** | The Proposed Development would cause a moderate improvement in the existing view for a sensitive visual receptor |
| **Substantial Beneficial** | The Proposed Development would cause a substantial improvement in the existing view for a sensitive visual receptor |

5.49 For the purposes of the assessment, substantial or moderate visual effects (adverse or beneficial) that are permanent are deemed to be significant.

5.50 The following aspects of the Proposed Development are likely to have potential landscape and visual effects, and will be considered in the assessment:

- The construction and operation of the core resort on Swanscombe Peninsula (including a range of events spaces, rides, studio attractions, cinemas, theatres, a water park, an open-air arena, night clubs, catering, retail and amenity facilities). For the purposes of this scoping assessment, the following indicative potential heights above ordnance datum of built structures within the park have been assumed: buildings (+32.0m); structures e.g. themed mountain (+50.0 – 60.0m); rides/roller coasters (+40.0m); and hotels (+40.0m).

- The construction and operation of c.30,000m$^2$ of event space for conferences and trade shows on Swanscombe Peninsula.

- The construction and operation of a range of hotels with a combined total of c. 5,000 bedrooms. For the purposes of this scoping assessment, the indicative potential heights above ordnance datum of hotels outside of the park have been assumed as

+50.0m.

- The creation of a country park beside the River Thames.
- The construction and operation of c.14,000 car parking spaces, located partly in multi-storey facilities set within a former quarry, and bus and coach parking.
- The construction and four-lane dual carriageway between the core area and the A2(T)/ B259 junction.
- Flood prevention works.
- Landscape works throughout the development site, incorporating earth shaping, new planting and habitat creation.
- Provision of service infrastructure including water, electricity and gas supplies, telecommunications and arrangements for water and wastewater treatment and disposal.
- Removal of trees/scrub vegetation in association with site clearance and construction works throughout the development site.
- Removal of redundant buildings and other built structures in association with site clearance and demolition works.
- Lighting and nocturnal visual effects during construction works and operation.
- Temporary compounds, storage areas and haul roads associated with construction works.
- Demolition and decommissioning of the proposed development

## POTENTIAL MITIGATION MEASURES AND RESIDUAL EFFECTS

5.51 A preliminary high level assessment of the potential landscape and visual effects, mitigation measures and residual effects of the proposed development is set out in **Tables 5.6** and **5.7**. This assessment is not exhaustive, and other landscape and visual effects may be identified as the project design evolves.

**Table 5.6: Potential Landscape Effects, Mitigation Measures and Residual Effects**

| Potential Landscape Character Effects | Potential Landscape Mitigation Measures | Residual Landscape Effects |
|---|---|---|
| High magnitude of change to the landscape character of Swanscombe Peninsula, which is of moderate-high sensitivity | High quality architectural, engineering and landscape design to ensure good fit with scale and pattern of landscape context | Moderate adverse, neutral and minor-moderate beneficial landscape effects |
| Moderate-high of magnitude change to the landscape character of Ebbsfleet Valley, which is of moderate-low sensitivity | Sensitively routed and designed transport infrastructure in line with DMRB Good Roads Guide principles to ensure good fit with scale and pattern of landscape context | Moderate adverse, neutral and moderate beneficial landscape effects |

**Table 5.7: Potential Visual Effects, Mitigation Measures and Residual Effects**

| Potential Visual Effects | Potential Visual Mitigation Measures | Residual Visual Effects |
|---|---|---|
| High magnitude of change to short-range views of Swanscombe Peninsula from residential high rise flats on edge of Ingress Park (Viewpoint 15), who are highly sensitive visual receptors | High quality architectural, engineering and landscape design to provide improvements to existing views as far as possible | Substantial-moderate adverse, neutral and minor beneficial visual effects |
| High magnitude of change to short-range views for recreational users (highly sensitive visual receptors) of public footpaths on Swanscombe Peninsula (Viewpoints 21, 22 and 23) | High quality architectural, engineering and landscape design to provide improvements to existing views as far as possible | Substantial-moderate adverse, neutral and minor beneficial visual effects |
| Moderate-high magnitude of change to short and medium-range views of Swanscombe Peninsula for recreational users (highly sensitive visual receptors) of the Thames Path on the northern riverbank (Viewpoints 1, 2 and 5) and southern riverbank (Viewpoints 12, 13 and 15) | High quality architectural, engineering and landscape design to provide improvements to existing views as far as possible | Moderate adverse, neutral and minor-moderate beneficial visual effects |

| Potential Visual Effects | Potential Visual Mitigation Measures | Residual Visual Effects |
|---|---|---|
| Moderate-low magnitude of change to the visual settings of listed buildings (Viewpoints 14, 16, 19, 20, 24, 25 and 26), which are highly sensitive heritage assets | Sensitive siting of built elements to minimise deterioration of existing views from specific listed buildings as far as possible | Slight adverse or neutral visual effects |
| Moderate-high magnitude of change to medium-range views of Swanscombe Peninsula from residential high rise flats in Grays (Viewpoints 3 and 4), who are highly sensitive visual receptors | High quality architectural, engineering and landscape design to provide improvements to existing views as far as possible | Moderate adverse, neutral and minor-moderate beneficial visual effects |

5.52 The proposed development has the potential to have cumulative landscape or visual effects with other major development proposals within the study area. These include:

- Ebbsfleet Garden City
- Crossrail
- Lower Thames Crossing
- London Gateway Port

5.53 An assessment of the potential cumulative landscape and visual effects of the proposed development in combination with the above proposals will be undertaken in accordance with best practice set out in the GLVIA.

## POTENTIAL TRANSBOUNDARY EFFECTS

5.54 It is considered unlikely that the proposed development would have any potential significant transboundary landscape and visual effects.

## TOPICS SCOPED OUT OF FURTHER ASSESSMENT

5.55 At this stage, no topics are proposed to be scoped out of the assessment. However, this position may change in light of further baseline survey work and design development.

# Six ◆ Ecology

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

6.1 The following relevant law, policy and best practice guidance will be considered by the assessment:

### European legislation

6.2 The following European directives and international conventions are implemented through UK legislation and regulations:

- EC Directive 79/409/EEC on the Conservation of Wild Birds as amended (also called the Birds Directive).
- EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora as amended (also called the Habitats Directive).
- The Convention on wetlands of International Importance Especially as Waterfowl Habitat (1971): also called the Ramsar Convention.
- Convention on the Conservation of European Wildlife and Natural Habitats (1979): also called the Bern Convention.
- The Convention on the Conservation of Migratory Species of Wild Animals (1980): also known as the Bonn Convention.

### National legislation and regulations

6.3 The main legal framework for the assessment is provided by the following Acts of Parliament and Regulations:

- National Parks and Access to the Countryside Act 1949.
- Wildlife and Countryside Act 1981 (as amended).
- Environmental Protection Act 1990.
- Deer Act 1991.
- Water Resources Act 1991.

- Protection of Badgers Act 1992.
- Environment Act 1995.
- Wild Mammals Protection Act 1996.
- Countryside and Rights of Way Act 2000 (the CRoW Act).
- Natural Environment and Rural Communities Act 2006 (the NERC Act).
- The Conservation of Habitats and Species Regulations 2010.
- Hedgerows Regulations 1997.

**National Planning Policy Framework**

6.4 The Government's current planning policies on land use planning in England are set out in the National Planning Policy Framework[17] (NPPF). The following NPPF policies are relevant to consideration of biodiversity and geological conservation matters:

- Policy 11 – Conserving and enhancing the natural environment.

**Planning Practice Guidance**

6.5 Planning Practice Guidance on the natural environment[18] supports the NPPF by explaining key issues in implementing policy to protect biodiversity, ecosystems and green infrastructure.

**Local planning policy**

6.6 The Site falls partly within two local planning authority areas within North Kent: Dartford Borough and Gravesham Borough. The following local planning policy documents are applicable to the study area:

- Dartford Local Plan Core Strategy, Adopted September 2011
- Dartford Local Plan 1995: Saved Policies Following Adoption of the Core Strategy, September 2011 (which will be replaced by the Development Management DPD

[17] National Planning Policy Framework (March 2012, DCLG)
[18] http://planningguidance.planningportal.gov.uk/blog/guidance/natural-environment/

Policies).

- Gravesham Local Plan Core Strategy, Adopted September 2014

6.7 A review of the above documents has identified the following planning policy issues of relevance to consideration of ecology matters:

- Policy CS14 – Green Space (Dartford Core Strategy)
- Policy C13 – Protection of Sites of Special Scientific Interest and National Nature Reserves (Dartford Local Plan 1995 Saved Policies)
- Policy C14 – Protection of Sites of Nature Conservation Interest (Dartford Local Plan 1995 Saved Policies)
- Policy C15 – Establishment of Local Nature Reserves (Dartford Local Plan 1995 Saved Policies)
- Policy C16 – Protection of Sites of Nature Conservation Value (Dartford Local Plan 1995 Saved Policies)
- Policy C17 – Management agreements for safeguarding sites of nature conservation interest (Dartford Local Plan 1995 Saved Policies)
- Policy CS12 – Green Infrastructure (Gravesham Core Strategy)

**Best practice guidance**

6.8 The Chartered Institute of Ecology and Environmental Management's *Guidelines for Ecological Impact Assessment*[19] is widely acknowledged as providing good practice guidance for assessing the potential effects of development on ecology in the UK.

6.9 Species-specific baseline survey and evaluation best practice guidance is also referred to below.

**Relevant designations**

6.10 Below is set out relevant ecology and geodiversity designations. They are also shown on figure 5.2.

[19] Guidelines for Ecological Impact Assessment in the United Kingdom (Institute of Ecology and Environmental Management, June 2006)
http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/EcIA_Guidelines/TGSEcIA-EcIA_Guidelines-Terestrial_Freshwater_Coastal.pdf

***European Protected Sites***

6.11 There are no European Protected Sites either within or immediately adjacent to the Site. The nearest site, which lies approximately 7.5km east of the Site, is the Thames Estuary & Marshes SPA/Ramsar noted for its important assemblage of wintering waterbirds including grebes, geese, ducks and waders. The site is also important in spring and autumn migration periods.

6.12 The Medway Estuary and Marshes SPA/Ramsar is located approximately 19km to the east of the Site, is noted as supporting important numbers of waterbirds throughout the year. In summer, the Medway Estuary supports breeding waders and terns, whilst in winter it holds important numbers of geese, ducks, grebes and waders. The site is also of importance during spring and autumn migration periods, especially for waders.

6.13 The Swale SPA/Ramsar, approximately 32km east of the Site, is noted for its important numbers of waterbirds throughout the year. In summer, the site is of importance for Marsh Harrier *Circus aeruginosus*, breeding waders and Mediterranean Gull *Larus melanocephalus*. In spring and autumn migration periods, as well as during winter, the Swale supports very large numbers of geese, ducks and waders.

***Sites of Special Scientific Interest***

6.14 Bakers Hole SSSI (TQ 612741) is located within the Ebbsfleet Valley part of the Site to the north-west of Ebbsfleet International Rail Station. It is a 6.5ha key Pleistocene site exposing various periglacial and temperate climate deposits. As a geological or earth science SSSI, it has been chosen for its research value.

6.15 Located approximately 0.6km south-west of the Site is another geological SSSI, Swanscombe Skull Site (TQ 597743). This 3.9ha site is nationally important as the only site to yield Lower Palaeolithic human remains. For this reason it is also designated a National Nature Reserve (NNR).

6.16 On the opposite side of the River Thames in South Essex, approximately 1.2km north-west of the Site, is West Thurrock Lagoon and Marshes SSSI (TQ 585766). This 66.98ha site is a biological SSSI important for wintering wildfowl and waders. It features extensive intertidal mudflats and large areas of reedbed.

***Sites of Special Scientific Interest***

6.17 Part of the Ebbsfleet Marshes Local Wildlife Site (LWS (TQ 619738) is located within the Ebbsfleet Valley part of the Site. Habitats include grassland, marsh, scrub, the River Ebbsfleet and a large flooded quarry to the north east known as ‘blue lake’. This Local Wildlife Site (LWS) was first notified in 1985, but since then the construction of the Channel Tunnel Rail Link, Ebbsfleet International Rail Station and its associated parking has caused severe fragmentation of the LWS. This is likely to have decreased its

ecological value, and some of the habitats and species listed in the original citation may no longer be present.

6.18 The Alkerden Pit LWS (TQ 597745) is located close to the Site to the south of the railway line, A226 and Swanscombe Peninsula. Habitats include grassland, scrub, woodland and an inland cliff. The site was mainly designated for supporting nationally and county scarce plant species including narrow-leaved everlasting pea *Lathyrus sylvestris*, a relict population of yellow vetchling *Lathyrus aphaca* and the county's largest population of green-flowered helleborine *Epipactis phyllanthes*. An area of former landfill on the site is also known to support a rare assemblage of invertebrates including at least one UK Biodiversity Action Plan (BAP) species.

## BASELINE STUDIES

6.19 The Site is located on the southern bank of the River Thames within North Kent to the east of London. The northern part of the site includes land on Swanscombe Peninsula, and the southern part of the Site includes land within Ebbsfleet Valley extending to the A2.

6.20 A series of ecological baseline surveys were undertaken between Spring 2012 – Spring 2013. These surveys focused predominantly on the Swanscombe Peninsula, although some studies were also undertaken in the Ebbsfleet Valley where access to land was permissible. The findings of these surveys are summarised below.

### 2012 Desk Study and Phase I Habitat Survey Report (CBA, 2012)

6.21 Three statutorily designated sites were identified: Baker's Hole Site of Special Scientific Interest (SSSI) and the Swanscombe Skull Site National Nature Reserve (NNR) and SSSI, both of which are designated for their geological interest. North of the River Thames, the West Thurrock Lagoon and Marshes SSSI is designated for its important assemblages of overwintering waders and wildfowl. The non-statutorily designated Alkerden Pit and Swanscombe Heritage Park Local Wildlife Site (LWS) and Ebbsfleet Marshes LWS are also present within 2km of the proposed development area.

6.22 A number of protected species and species of nature conservation importance have been recorded within the boundaries of the proposed development area including water vole, great crested newt, common pipistrelle, daubenton's and noctule bats. Species recorded within a 2km radius of the proposed development area include badger, soprano pipistrelle, brown-long eared and serotine bats.

6.23 The Phase 1 habitat survey revealed a range of different habitats within the proposed development area including woodland, scrub, grassland, swamp, open water, mudflat, saltmarsh, inland cliff and hedgerow. The dominant vegetation type was species-poor grassland with scattered scrub. This range of habitats has the potential to support

notable plant species, notable invertebrate species, bats, birds, great crested newts, water voles and reptiles.

6.24 Overall the most valuable habitats in the survey area from a nature conservation perspective are considered to be the more species-rich grasslands, reedbeds, mudflats, saltmarsh and open mosaic habitats on previously developed land. However, other habitats and features such as the woodland, scrub and standing water will also have value, including for example their potential to support protected species such as water voles.

6.25 Although it would otherwise be of relatively low value, some of the less species-rich grassland also has the potential to support a range of notable species. For example, areas of coarse grassland, especially where present with ruderal and scrub vegetation, are likely to be of value to reptiles.

**2012 Botanical Survey Report (CBA, 2012)**

6.26 Botanical surveys were undertaken in relation to the following habitat types:

- Early successional/ruderal habitats;
- Grasslands;
- Ditches and Waterbodies;
- Reedbed;
- Scrub;
- Woodland; and,
- Salt-marsh

6.27 Much of the grassland on the peninsula consists of a species poor coarse sward with limited forb interest. However, among this coarse grassland, particularly in the northern part of the site, there are pockets of less coarse and more species rich grasslands characteristic of neutral to alkaline soils. The site also supports early successional and ruderal habitats, secondary woodland, reedbeds and small areas of saltmarsh. The site as a whole supports nationally scarce plant species, including yellow vetchling *Lathyrus aphaca*, bithynian vetch *Vicia bithynica*, man orchid *Orchis anthropophora*, divided sedge *Carex divisa* and golden samphire *Inula crithmoides.*

6.28 The habitats within Bamber Pit were not recorded as supporting nationally scarce species during this survey and were considered to be of Parish Importance for their plant

species and communities.

**2012 Amphibian Survey Report (CBA, 2012)**

6.29 The results of the amphibian survey suggest that great crested newts are not present in any of the surveyed water bodies on the Swanscombe peninsula north of the A226. No signs of this species were recorded during the survey in 2012 and the desk-top study revealed no historical records either. The HSI scores suggest that most of the water bodies on the peninsula are highly suitable habitats so it may be that the A226 as a busy main road has proved to be an effective barrier preventing colonisation of this area.

6.30 The results of the survey did, however, identify a small population of smooth newts and a population of marsh frogs present on the Swanscombe peninsula, mainly concentrated around Swanscombe Marshes.

**2012 Breeding Birds Survey Report (CBA, 2012)**

6.31 A total of 42 bird species were recorded breeding or likely breeding within the Site. One species included on Schedule 1 of the Wildlife and Countryside Act (as amended) 1981, Cetti's warbler, was recorded breeding on the Site.

6.32 The species present and confirmed to be breeding are typical of the habitats present within the Site which are dominated by a mixture of open water with reed beds, areas of dense scrub and open grassland and areas of broad leaved woodland.

6.33 A total of nine species of conservation importance were found to be breeding or likely breeding within the Site. Six species; song thrush, common cuckoo, starling, linnet, lapwing and skylark are included in the Red List of Birds of Conservation Concern (BoCC3). These six species, as well as dunnock and reed bunting, are UKBAP Priority Species and are included on the NERC 2006 list of Species of Principal Importance whilst song thrush, skylark, linnet and reed bunting are also included within the Kent Biodiversity Action Plan. Dunnock and reed bunting are also listed as 'Amber' on the Birds of Conservation Concern schedule. Several other species recorded breeding within the Site are 'Amber' listed on the BoCC3 list including stock dove and green woodpecker.

**2012 Terrestrial Invertebrate Survey Report (CBA, 2012)**

6.34 Overall, the Site supports a variety of early successional habitats which support a diverse assemblage of invertebrates associated with such habitat types.

6.35 In total 479 invertebrate species were recorded during the survey, of which 80 were considered to be of conservation significance, including 60 nationally scarce (or nationally scarce a or b), 7 UK BAP and 13 RDB species.

**2012 Terrestrial Invertebrate Survey Supplementary Report (Spiders [Araneae] and related groups) (CBA, 2012)**

6.36 A minimum of 71 spider taxa plus 11 other arachnids was identified from the site. Eight species of conservation importance were noted during the site visits including *Sitticus distinguendus*, a species of principal importance for biodiversity in England under schedule 41 of the NERC Act 2006.

6.37 At least eight species of conservation concern were shown to be present on the Swanscombe Marshes site.

6.38 The site is of most importance for its thermophilic spider fauna and some of the sparsely vegetated areas are of national significance for this reason.

6.39 *Sitticus distinguendus* was found to be present at a previously unknown location at Swanscombe and what was most probably this species was found again at the site of its original discovery. *Sitticus distinguendus* may exist at low population densities in other sparsely vegetated areas across the site.

**2012/13 Wintering Birds Survey Report (CBA, 2013)**

6.40 The total number of birds recorded during high tide counts ranged between 80 and 1175 with a mean abundance of 572. During low tide counts, abundance ranged between 227 and 718 with a mean abundance of 412. It was considered that the bird numbers were generally at their peak between December and March.

6.41 In determining the conservation value of the Site, the results of the surveys were reviewed in relation to the criteria used for the designation of Local Wildlife Sites within Kent for wintering birds. Four Kent RDB3 species were recorded but three of these are listed as KRDB3 species due to their breeding status rather than numbers in winter. Only one species recorded, knot, is a KRDB3 species due to its wintering bird status.

**Further baseline surveys**

6.42 Given the length of time that has elapsed since the above surveys were completed, it is proposed that a further suite of surveys be undertaken between autumn 2014 and continue through to late summer 2015. Additionally, a number of species groups have not been previously surveyed, and the geographical scope of the proposed development has been further defined since the original survey work was completed. These further surveys will also be used to confirm or re-evaluate the ecological resource. **Table 6.1** below provides a summary of the proposed baseline survey work to be undertaken to inform the EcIA.

**Table 6.1: Ecology survey schedule**

| Survey | Type/Extent | Optimal Survey Timings | Notes |
|---|---|---|---|
| **Swanscombe Peninsula** | | | |
| Wintering birds | Full | Sep 14 – Mar 15 | Underway |
| Breeding birds | Full | Mar – Jun 15 | Focus on Cetti's warbler and nightingale |
| Amphibians | No requirement to repeat or for update surveys | | |
| Badgers | 1 day surveillance | Feb 15 | Not recorded previously |
| Bats | Update surveys | May – Sep 15 | Complete surveys commenced in 2012 |
| Botany | 2 day surveillance | May – Jun 15 | Verify previous survey data |
| Fish/freshwater aquatic invertebrates | Full | Apr - Jun 15 | |
| Tidal and estuarine aquatic invertebrates | Full | Apr – Jun 15 | |
| Terrestrial invertebrates | Surveillance surveys | Apr – Sep 15 | Verify previous survey data |
| Dragonflies | Full | Apr – Sep 15 | |
| Reptiles | Full | Apr – Jun 15 | Known presence, but no data on numbers / distribution |
| Small mammals<br>• Harvest mice<br>• Water shrew | Full | April – Jun 15 | |
| Water voles | Full | Mar – Jun / Sep 15 | |
| Dormice | To be determined, based on preliminary habitat assessments | | |
| **Ebbsfleet Valley** | | | |
| Desk Study/Phase I | Update | Anytime Nov - Feb | Requires access to areas not previously surveyed |
| Wintering birds | Not required | | |
| Breeding birds | Full | Mar – Jun 15 | |
| Amphibians | Identify waterbodies and undertake Habitat Suitability Index (HSI[20]) habitat assessment as the first stage | | |
| Badgers | Full | Feb – Mar 15 | |
| Bats | Full | Apr – Sep 15 | |
| Botany | Full | Apr – Jun 15 | |
| Fish / aquatic invertebrates | Full | Apr – Jul 15 | Scope needs to be determined through initial habitat evaluation |
| Terrestrial invertebrates | Full | Apr – Sep 15 | Scope needs to be determined through |

[20] Oldham R.S., Keeble, J., Swan, M.J.S. and Jeffcote, M. (2000) Evaluating the suitability of habitat for the great crested newt (Triturus cristatus). Herpetological Journal 10(4), 143-155.

| Survey | Type/Extent | Optimal Survey Timings | Notes |
|---|---|---|---|
| | | | initial habitat evaluation |
| Dragonflies | Full | Apr – Sep 15 | Scope needs to be determined through initial habitat evaluation |
| Reptiles | Full | Apr – Jun 15 | Scope needs to be determined through initial habitat evaluation |
| Small mammals<br>• Harvest mice<br>• Water shrew | Full | Apr – Jun 15 | Scope needs to be determined through initial habitat evaluation |
| Water voles | Full | Apr – Jun 15 | Scope needs to be determined through initial habitat evaluation |
| Dormice | To be determined, based on preliminary habitat assessments | | |

## CONSULTATIONS UNDERTAKEN TO DATE

### Natural England

6.43 Natural England's letter dated 4th November 2013 provided initial advice on the scope of the EcIA. Natural England advises that a full assessment of the potential effects of the development on biodiversity should be undertaken using methodologies based on the good practice guidance set out in *Guidelines for Ecological Impact Assessment (EcIA)*[21] produced by the Chartered Institute of Ecology and Environmental Management (CIEEM). In summary, Natural England advises that the assessment should:

- Assess the potential for the proposal to affect internationally designated sites falling under the scope of the Conservation of Habitats and Species Regulations 2010. Furthermore, should a likely significant effect on one or more of these sites be identified, or be uncertain, the competent authority may need to prepare an Appropriate Assessment in addition to consideration of effects through the EIA process;

- Assess the potential for the proposal to affect nationally designated sites falling under the scope of the Wildlife and Countryside Act 1981 (as amended);

- Consider effects on local wildlife sites;

[21] IEEM (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom.* http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/EcIA_Guidelines/TGSEcIA-EcIA_Guidelines-Terestrial_Freshwater_Coastal.pdf

- Assess the effects of all phases of the proposal on species protected by the Wildlife and Countryside Act 1981 (as amended) and by the Conservation of Habitats and Species Regulations 2010;

- Assess the effect of the proposals on habitats and/or species listed as 'Habitats and Species of Principal Importance' within the England Biodiversity List, published under the requirements of s41 of the Natural Environment and Communities (NERC) Act 2006;

- Undertake detailed baseline surveys for all relevant habitats and species, including: the collation of historical data; the status of the habitats and species present; the identification of direct and indirect effects of the development on these habitats and species; and full details of any mitigation or compensation that might be required. As far as possible adverse effects should be avoided and include provision for overall wildlife gain; and,

- Assess the cumulative and in-combination effects of all aspects of the scheme's design, construction and operation.

### Kent County Council

6.44 Kent County Council's letter of 7th November 2013 advises that information will need to be provided that enables the competent authority to determine whether an Appropriate Assessment is required under the Conservation of Habitats and Species Regulations 2010.

## OUTLINE ASSESSMENT METHODOLOGY

### General approach

6.45 The general approach to the Assessment will follow the latest version of the Guidelines for Ecological Impact Assessment produced by the Chartered Institute of Ecology and Environmental Management (CIEEM)[22]. The guidelines cover all stages of EcIA, including both evaluation and effect criteria.

6.46 The overall approach to the assessment of ecological effects is outlined below.

[22] IEEM (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom.* http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/EcIA_Guidelines/TGSEcIA-EcIA_Guidelines-Terestrial_Freshwater_Coastal.pdf

**Identification of the resource/baseline conditions**

6.47 The existing and proposed baseline studies 3 will identify the types and value of habitats and species found in the Site. This baseline will provide the reference point against which the nature, extent and significance of potential ecological effects can be assessed.

6.48 The study area for the desk study of existing biological records and designated sites extends up to between 2km and 5km from the Site, which enables the results of the surveys to be placed in context within the surrounding area (see figure 6.1).

**Evaluation of the resource**

6.49 In addition to the CIEEM guidance, criteria described in Ratcliffe (1977)[23] and the Nature Conservancy Council (1989)[24] will also be used to assess the ecological value of habitats and communities. The primary criteria include: rarity, typicalness, size, diversity, naturalness and fragility. Subsidiary criteria include ecological position, intrinsic appeal, potential value, and recorded history.

6.50 There are other criteria used for assessing the ecological importance of a site, based upon their value for particular species or assemblages of species. Examples include 'scoring systems' for bird communities (NCC, 1989 and Fuller, 1980)[25] and reptile communities (Froglife, 1999)[26]. The relative importance of species is evaluated using published information such as Red Data Books, County Floras and national / local BAPs. These identify whether particular species are uncommon or declining, and list relevant species of importance identified by national and local conservation organisations.

6.51 The assessment and evaluation of habitats and species of nature conservation value, as they relate to the proposed development, will also be considered in the context of the Kent Biodiversity Action Plan[27] and the Local Wildlife Site selection criteria[28] to aid the evaluation of habitat and species assemblages surveyed. Specific reference will also be made to:

- Natural England's guidance on surveying terrestrial and freshwater invertebrates for nature conservation evaluation[29];

[23] Ratcliffe, D. A. (ed) (1977). A Nature Conservation Review Vols 1 and 2. CUP.
[24] NCC (1989). Guidelines for the selection of biological SSSIs. Rationale, operational approach and criteria. Detailed guidelines for habitats and species groups. NCC, Peterborough.
[25] Fuller, R. J. (1980). A method for assessing the ornithological importance of sites for nature conservation. Biological Conservation 17 pp229-239.
[26] Froglife (1999). Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.
[27] http://www.kentbap.org.uk/
[28] Kent Wildlife Trust (2006). *Local Wildlife Sites in Kent Criteria for Selection and Delineation Version 1.3.*
[29] Drake, C. M., Lott, D. A., Alexander, K. N. A. and Webb, J. (2007). Surveying terrestrial and freshwater invertebrates for conservation evaluation. Natural England Research Report NERR005.

- Buglife and English Nature's 'Planning for invertebrate biodiversity'[30], which provides specific guidance on the conservation of invertebrates and invertebrate assemblages as an integral component of planned development.

- Buglife's good practice planning guidance[31] and Brownfield Hub guidance[32]; and

- Colin Plant Associates (UK) guidance on ecological assessment and invertebrates[33], including criteria for defining the significance of invertebrate habitat.

6.52 In addition to the individual species and groups the overall species and habitat assemblage or biodiversity is evaluated. Biodiversity has been given a number of definitions but, insofar as it relates to EIA, it is generally considered as including both structural relationships (spatial linkage, fragmentation, aspect, dispersion etc.) and functional relationships (nutrient cycling rates, energy flow rates, metapopulation dynamics etc.).

6.53 **Table 6.2** sets out the proposed criteria evaluating the nature conservation interest of the Site and its environs.

**Table 6.2: Ecology resource evaluation criteria**

| Value | Evaluation Criteria |
|---|---|
| International | An internationally designated site or candidate site Special Protection Area (SPA), Special Area for Conservation (SAC, Ramsar) |
| National | A nationally designated site (Sites of Special Scientific Interest (SSSIs), National Nature Reserves (NNRs) etc |
| Regional | Viable areas of key habitat identified in the Regional BAP or smaller areas of such habitat which are essential to maintain the viability of a larger whole. Sites which exceed the County-level designations but fall short of SSSI selection guidelines where these occur. |
| County | County sites and other sites which the designating authority has determined meet the published ecological selection criteria for designation including Local Nature Reserves selected on County criteria. |
| Local (including District) | Areas of habitat identified as being of Local Value in the relevant Natural Area profile<br>Local Nature Reserves not selected on County criteria. |
| Parish/Neighbourhood | Areas of habitat considered to appreciably enrich the habitat resource within the context of the Parish or Neighbourhood e.g. species-rich hedgerows. |
| Within the zone of influence | This may be the project site or a larger area. |

[30] Massini, P., Roberts, J. and Hitchock, G. (2006). All of a buzz in the Thames Gateway. Planning for invertebrate biodiversity. Report for and on behalf of Buglife and English Nature.
[31] https://www.buglife.org.uk/good-practice-planning-invertebrates
[32] https://www.buglife.org.uk/brownfield-hub
[33] Colin Plant Associates (UK). Invertebrates and Ecological Assessment. http://www.ieem.net/docs/Colin%20Plant%20-%20Invertebrates.pdf

| Value | Evaluation Criteria |
|---|---|
| Negligible | Sites or areas which support few or no habitats, communities or species populations of nature conservation interest. Typical of such areas are most intensively managed silage fields and arable crops. |

**Assessment of effects**

6.54 Effects will be assessed in the context of the predicted baseline conditions to encompass the lifetime of the development. The following factors will be considered when assessing the effects:

- Confidence in predictions;
- Extent of effect;
- Duration;
- Reversibility;
- Timing and frequency and,
- Magnitude of effect.

6.55 The magnitude or physical extent of predicted effects upon an ecological feature is presented, wherever possible, in quantifiable terms. For example, the area of land taken, percentage of habitat lost or the number of communities, species or individuals affected. Effect magnitude also considers the context of the feature affected within the categories of relative importance described previously. For example, if there is an internationally designated site, the significance of predicted effects is assessed within an international context with reference to the relevant legislation.

## ASSESSMENT OF SIGNIFICANCE CRITERIA

6.56 In the CIEEM guidance[34], an ecologically significant effect is defined as an effect on the integrity of a defined site or ecosystem and/or conservation status of habitats or species within a given geographical area. The value of any feature that would be significantly affected is then used to identify the geographical scale at which the effect is significant. The guidance includes illustrative criteria for in the assessment, which can be adapted based on professional judgement.

[34] IEEM (2006). *Guidelines for Ecological Impact Assessment in the United Kingdom.* http://www.cieem.net/data/files/Resource_Library/Technical_Guidance_Series/EcIA_Guidelines/TGSEcIA-EcIA_Guidelines-Terestrial_Freshwater_Coastal.pdf

## POTENTIAL MITIGATION MEASURES AND RESIDUAL EFFECTS

6.57 The following aspects of the Proposed Development are likely to have potential ecological effects:

- The construction and operation of the London Paramount on Swanscombe Peninsula (including a range of events spaces, rides, studio attractions, cinemas, theatres, a water park, an open-air arena, night clubs, catering, retail and amenity facilities).
- The construction and operation of c.30,000m$^2$ of event space for conferences and trade shows on Swanscombe Peninsula.
- The construction and operation of a range of hotels with a combined total of c. 5,000 bedrooms.
- The creation of a country park beside the River Thames.
- c. 14,000 car parking spaces, located partly in multi-storey facilities, and bus and coach parking.
- A new four-lane dual carriageway between the core area and the A2(T) / B259 junction.
- Flood protection construction works.
- Landscape works throughout the development site, incorporating earth shaping, new planting and habitat creation.
- Provision of service infrastructure including water, electricity and gas supplies, telecommunications and arrangements for water and wastewater treatment and disposal.
- Removal of trees/scrub vegetation in association with site clearance and construction works throughout the development site.
- Removal of redundant buildings and other built structures in association with site clearance and demolition works on Swanscombe Peninsula.
- Lighting/nocturnal effects during construction works and operation.

6.58 A preliminary high level assessment of the potential ecological effects of the proposed development as described in Chapter 3, mitigation measures and residual effects is set out in **Table 6.3**. This assessment is not exhaustive, and other ecological effects may be identified as the project design evolves.

6.59 The assessment of potential ecological effects is based on an incomplete survey baseline and there remain therefore areas of uncertainty, reflected in the above assessment. Nevertheless, it is considered that the initial survey work has provided a suitable basis for identifying the potential ecological effects associated with the construction and operation of the proposed scheme. As such it is considered that this scope is a robust consideration of the likely ecological effects that will require consideration through the EIA process.

**Table 6.3: Potential ecological effects, mitigation measures and residual effects**

| Potential Ecological Effects | Potential Ecological Mitigation Measures | Residual Ecological Effects |
|---|---|---|
| **Construction Activities** | | |
| Construction activities: earth moving, noise, dust, traffic movements (potential effects on all ecological receptors). | Implementation of a Construction Environmental Management Plan (CEMP) to control all construction activities for the proposed scheme. The CEMP would include provision for an Ecological Clerk of Works to supervise all elements of construction activity potentially affecting ecological receptors. | Considered not to be significant at this stage |
| Vegetation clearance – timing (potential effects on: birds; invertebrates; reptiles; botany; amphibians; bats) | Phasing of works to avoid bird nesting season or hibernation periods. Also phased to enable seed collection for re-establishment of grassland habitats post-construction, as part of the landscaping works | Considered not to be significant at this stage |
| Direct loss of species due to traffic movements (potential effects on: reptiles; amphibians) | Use of protective fencing to exclude construction areas from surrounding habitats. | Considered not to be significant at this stage |
| Noise / vibration disturbance to species during construction (potential effects on: breeding and wintering birds; invertebrates; reptiles) | Where required, use of low impact machinery to reduce noise/vibration disturbance effects. Phasing of works to avoid most sensitive times of year. | Considered not to be significant at this stage |
| Erosion due to vehicle movements transporting materials across Site; generation of dust (during dry weather) and/or silt run-off during rainfall events) (potential effects on: | Use of temporary haul roads/tracks where considered necessary | Considered not to be significant at this stage |

| Potential Ecological Effects | Potential Ecological Mitigation Measures | Residual Ecological Effects |
|---|---|---|
| birds; invertebrates; botany; amphibians; aquatic habitats) | | |
| Excessive dust generated as part of construction activities (potential effects on: invertebrates; botany) | Use of standard construction site damping down techniques | Considered not to be significant at this stage |
| Construction of new land forms (potential effects on: birds; invertebrates; reptiles; botany; amphibians; bats) | Phasing of works to ensure re-colonisation of new land forms by invertebrates, reptiles and an associated flora. | The construction of the scheme would be unlikely to retain the current geographical extent of areas of ecological interest but careful planning and phasing of works would enable at least some of these areas to either be retained or re-created. |
| Services construction – electricity, foul drainage, water supply etc. (potential effects on: birds; invertebrates; reptiles; botany; amphibians) | Phasing of works to avoid sensitive times of year; protective fencing to exclude working areas from surrounding habitats; use of no-dig techniques where appropriate to reduce disturbance effects. | Considered not to be significant at this stage |
| Excessive run-off resulting from high rainfall periods during construction (potential effects on: birds; invertebrates; botany; amphibians; aquatic habitats) | Surface water management strategy within the CEMP. Use of grip drains, catch pits, bunding and temporary settlement tanks prior to discharge. | Considered not to be significant at this stage |
| Temporary drainage causing exposure of underlying geology/surface drainage (potential effects on: birds; invertebrates; botany; amphibians; aquatic habitats) | Surface water management strategy within the CEMP. Use of grip drains, catch pits, bunding and temporary settlement tanks prior to discharge. | Considered not to be significant at this stage |
| Pollution incidents arising from fuelling or poor management of chemicals (potential effects on: birds; invertebrates; botany; amphibians; aquatic habitats) | Secure, bunded, refuelling locations. Standard construction best practice for site storage and handling of fuels and chemicals, to be included in the CEMP. | Considered not to be significant at this stage |
| Night time working/ construction lighting (potential effects on: birds; bats; invertebrates) | To be avoided/minimised where possible. If required, use baffles or internal louvres to provide directional lighting and avoid light spillage | Considered not to be significant at this stage |
| Flood defence raising works (potential effects on: birds; invertebrates; botany; aquatic | Phasing of works to enable re-establishment of on-site vegetation and colonisation by | The construction of the scheme would be unlikely to be able to retain the current geographical |

| Potential Ecological Effects | Potential Ecological Mitigation Measures | Residual Ecological Effects |
|---|---|---|
| habitats) | invertebrates on a section-by-section basis. | extent of areas of ecological interest, but careful planning and phasing of works will enable at least some of these areas to either be retained or re-created. |
| Disturbance and silt mobilization resulting from dredging and jetty construction works Flood defence raising works (potential effects on: birds; invertebrates; botany; aquatic habitats) | Timing of works to avoid sensitive seasons. Phasing of works to minimise levels and extent of disturbance. Use of protective measures to limit silt mobilisation. Reprofiling works to ensure no long-term increases in erosion of the mudflats or retained saltmarsh | Considered not to be significant at this stage |
| **Operational/Existence Effects** | | |
| Disturbance associated with the operation of the venue from visitors, deliveries, site management etc. (potential effects on: birds; invertebrates; botany; amphibians; reptiles; aquatic habitats; bats) | Implementation of an Ecological Management and Monitoring Plan (EMMP), covering the whole site, but in particular focusing on those areas of retained and re-created habitats as components of a wider green infrastructure network within and linking the site to its surroundings. To encompass habitat management works, visitor and circulation management, particularly in relation to the retained reedbeds and marshes on the Peninsula. | An appropriately implemented EMMP, with areas surrounding the resort itself placed under a long-term management agreement, has significant potential to maintain and potentially enhance the ecological value of the site as a whole. |
| Permanent loss of habitat – trees (potential effects on: birds; bats) | It is currently anticipated that few, if any of the mature trees south of Black Duck Marsh or on the alignment of the entrance routes would be removed as part of the scheme. No other significant trees are located on the Site. | Considered not to be significant at this stage |
| Permanent loss of habitat –scrub (potential effects on: birds, particularly Cetti's warbler) | Provision of scattered scrub as part of site landscape proposals to replace a proportion of lost scrub. | It would not be possible to retain or re-create the full extent of scrub habitat currently present on-site. However, opportunity to re-establish at least some of the current resource would ensure |

| Potential Ecological Effects | Potential Ecological Mitigation Measures | Residual Ecological Effects |
|---|---|---|
| | | there is not a complete loss of this habitat. |
| Permanent loss of habitat – grasslands (potential effects on: birds; invertebrates; botany; reptiles) | Seed harvesting/hay harvesting of herb-rich areas of grassland. Sequenced in the programme with new construction works to enable re-seeding to be undertaken sequentially with newly landscaped and retained areas. This would also enable recolonisation by invertebrate communities from extant on-site populations. Retention of some grasslands to retain 'reservoir' of plants, invertebrates and an on-site population of reptiles, post-construction. Additionally, pre-construction translocation of reptiles to local receptor area. Retention and/or re-establishment of some scattered scrub within retained/recreated grasslands, to provide mosaic habitat and breeding bird habitat. | It would not be possible to retain or re-create the full extent of grassland and early successional habitats currently present on-site. However, opportunity to re-establish at least some of the current resource will ensure there is not a complete loss of these habitats, nor their associated assemblages of nationally scarce plants and invertebrates. |
| Permanent loss of habitat – bare ground (potential effects on: birds; invertebrates; botany; reptiles) | Retention and/or re-establishment of bare ground areas as part of the grassland mitigation approach | It would not be possible to retain or re-create the full extent of bare ground and early successional habitats currently present on-site. However, opportunity to re-establish at least some of the current resource would ensure there is not a complete loss of these habitats, nor their associated assemblages of nationally scarce plants and invertebrates. |
| Realignment of flood defences (potential effects on: birds; invertebrates; botany; reptiles) | As for the grassland / bare ground mitigation: careful sequencing of removal and reconstruction on a section-by-section basis to allow re-establishment /re-colonisation by vegetation, invertebrates and reptiles | The careful phasing and programming of the proposed flood defence works will enable the re-establishment of herb-rich grasslands, the creation of an array of bare areas and the natural recolonisation of the existing invertebrate assemblage. Nevertheless, it |

| Potential Ecological Effects | Potential Ecological Mitigation Measures | Residual Ecological Effects |
|---|---|---|
| | | would not be possible to retain or re-create the full extent of bare ground and early successional habitats currently present on these defences. However, opportunity to re-establish at least some of the current resource would ensure there is not a complete loss of these habitats, nor their associated assemblages of nationally scarce plants and invertebrates. |
| Long term changes to accretion and erosion of saltmarsh and mudflat habitats resulting from the existence of the jetty and increased wash arising from boat traffic (potential effects on: birds; invertebrates; botany) | The design of the jetty would need to be modelled to ensure that tidal flows around and through the structure do not increase potential erosion of the mudflats and saltmarsh. There may be requirements for protective measures to reduce the effects of wash from boats using the jetty | Appropriately designed and constructed jetty would be unlikely to increase the potential for erosion, beyond the current use of this reach of the river by a variety of cargo boats |
| Permanent loss of areas of saltmarsh and mudflat habitat, resulting from the operation of a marina and boat mooring facilities | To focus as far as possible, on habitat recreation including elements of brackish / saltmarsh habitats, to support those species most at risk through the construction and operation of the facilities. | Insofar as habitat creation may be possible through the implementation of the scheme, it is currently considered that the residual effects would be negligible |
| Increased public pressure (potential effects on: birds; invertebrates; botany; reptiles) | To be addressed in detail through the design process and Ecological Management Plan. To include: a 'zoned' approach to public access allowing some areas to remain completely undisturbed by public access; temporal closures of certain routes at sensitive times of the year; bird hides overlooking the reedbed and marshes; grazing control using 'wet fences'; interpretation and public information; local access; wardening and activities. | An appropriately implemented management plan, wardened and monitored would enable the habitat creation/re-creation work proposed for the scheme to be managed in the long-term for its ecological value, as well as an educational and recreational resource for visitors. It is considered that this would result in minor beneficial residual effects. |
| Habitat creation – peninsula wetlands (potential effects on: | To focus as far as possible, on the recreation of freshwater | Recreation of a combination of freshwater and brackish |

| Potential Ecological Effects | Potential Ecological Mitigation Measures | Residual Ecological Effects |
|---|---|---|
| breeding birds; water voles; invertebrates; botany; reptiles) | wetlands/grassland/scrub mosaic habitats, but will also include elements of brackish/saltmarsh habitats, to support those species most at risk through the construction and operation of the site. | wetland habitats on the peninsula would contribute towards the retention of existing ecological value, particularly in relation to breeding birds, invertebrate and botanical interest. It is considered that this would result in some minor beneficial residual ecological effects. |
| Habitat Creation/Management – Black Duck Marsh (potential effects on: breeding birds, water voles, amphibians) | Retention, re-establishment and 'conservation-driven' management to include: reedbeds, wet fences, freshwater grazing marsh | Re-establishing a management regime for Black Duck Marsh has significant potential to enhance this habitat. The management of the marsh through grazing and controlled public access, as well as the retention of some areas out of bounds to public access, would result in some minor beneficial ecological effects, both in relation to its intrinsic value, as well as in terms of public access. |
| Habitat Creation – Built Environment (potential effects on: invertebrates; botany) | Creation of green roofs and SuDS schemes that increase the 'permeability' of the venue, providing additional habitat of botanical and invertebrate interest. | The development of a green roof strategy across the venue will provide additional opportunities for supporting a variety of the plants currently found on site, as well as additional habitat for the associated invertebrate assemblage. It is considered that the implementation of this strategy would result in some beneficial residual ecological effects. |

6.60 The proposed development has the potential to have cumulative (or in combination) ecological effects with other major development proposals within the study area. These include:

- Ebbsfleet Garden City;
- Crossrail;

- Lower Thames Crossing; and
- London Gateway Port.

6.61 At this stage, the most likely issue is considered to be the potential for cumulative/in combination effects of overall increases in the population and visitor numbers on European Protected Sites located along the Thames Estuary and north Kent coast**.**

***Potential Effects on European Protected Sites***

6.62 The proposed scheme would result in a significant increase in the number of people visiting this part of North Kent, in addition to an increased local population due to construction workers and operations staff. It is recognised that whilst the London Paramount Entertainment Resort would be the primary destination for most visitors, there may be demand from visitors to also visit other destinations along the North Kent coast, including the Thames Estuary & Marshes SPA/Ramsar, the Medway Estuary & Marshes SPA/Ramsar and the Swale SPA/Ramsar. Recent research studies undertaken on the impacts of recreational disturbance on birds on the North Kent coast[35] demonstrate the sensitivity of the European protected sites and their feature conservation interests to uncontrolled access by visitors. Given the potential for the proposed development to generate significant levels of visitors to the North Kent coast, a screening assessment will be undertaken in accordance with the Habitats Regulations to determine the likely effects of the project on the European protected sites.

## POTENTIAL TRANSBOUNDARY EFFECTS

6.63 At this stage, it is considered unlikely that the proposed development would have any potentially significant adverse transboundary ecological effects. However, this is subject to confirmation by the screening assessment to be undertaken in respect of likely effects of the project on the European protected sites.

## TOPICS SCOPED OUT OF FURTHER ASSESSMENT

6.64 At this stage, no topics are proposed to be scoped out of the assessment. However, this position may change in light of further baseline survey work and design development.

[35] Footprint Ecology (2011). *Phase I – Bird Disturbance Report.* Report for and on behalf of the North Kent Environmental Planning Group

# Seven ◆ Water resources management

## INTRODUCTION

7.1 The purpose of this section is to summarise the proposed scope of works for the development of the Water Resources, Flood Risk & Drainage chapter of the London Paramount EIA. This Chapter will describe the impact of the development against the following headings.

- Flood risk
- Water resource management
- Water quality
- Drainage (foul and surface)

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

7.2 The following law, policy and best practice is considered relevant to the development for the headings mentioned above:

- National Planning Policy Framework (NPPF).
- The Flood and Water Management Act 2010.
- Planning Policy Statement (PPS) 25.
- The London Plan.
- Kent County Council Local Flood Risk Management Strategy 2013.
- Thames Estuary 2100 Plan (TE2100).
- River Basin Management Plan Thames River Basin District.
- London Flood Risk Appraisal.

7.3 The Flood Risk Assessment (FRA) will be prepared in accordance with the NPPF, published in March 2012. This states that:

*'Inappropriate development in areas at risk of flooding should be avoided by directing*

*development away from areas at highest risk, but where development is necessary, making it safe without increasing flood risk elsewhere'*.

7.4 The NPPF compliments PPS25 – Development and Flood Risk (March 2010), which adopts the *Source – Pathway – Receptor* assessment of risk and applies a sequential approach to flood risk. It is envisaged that the FRA will demonstrate that the principal objectives of PPS25 will be met.

7.5 The Water Framework Directive (WFD) has particular relevance in terms of water quality. Potential effects of the development on water quality during construction and operation will be considered through the assessment of Water Resources and detailed in the Construction and Environmental Management Plan (CEMP).

## RELEVANT DESIGNATIONS

7.6 The main water body in close proximity to the site is the River Thames, which is formally classified as the Lower Thames in this area. There are no water bodies classed as Sites of Special Interest (SSI) within the site. Neither are there any Ramsar sites in close proximity to the site.

7.7 The nearest Ramsar site is the Thames Estuary and Marshes, located approximately 22km downstream of the site. Given the distance between this site and the proposed development it is considered that this water body is not of particular concern to the development.

## BASELINE STUDIES

7.8 A baseline assessment covering the headings described above will be provided as part of the ES chapter. The following will be carried out to quantify the baseline assessment:

- Flood Risk: an assessment as to the existing flood mechanism and flood risk will be determined for the site.
- Water Resource Management: the existing potable water demand will be determined for the site.
- Drainage: an assessment of the existing drainage arrangement (foul and surface) will be carried out.
- Water Quality: an assessment of the existing water quality within the site will be carried out.

## CONSULTATIONS UNDERTAKEN TO DATE

7.9 No consultation has been carried out to date. The key stakeholders for the disciplines outlined in this chapter are the Environment Agency, Thames Water and the Local Authorities.

7.10 Consultation is expected to be undertaken soon, the timing of this consultation is subject to approval being met between LRCH and the EA.

## OUTLINE ASSESSMENT METHODOLOGY

7.11 The following methodology will be utilised to assess the proposed development against the baseline:

- Liaison with the Environment Agency and consultation with Local Planning Authorities to discuss and agree the scope and methodology for the FRA. This will include discussions and agreement regarding the modelling of: breach scenarios; adherence to TE2100 plans; requirements for safe access/egress and; outline flood response measures, in order to obtain current and relevant flood risk data for the site.

- Desktop studies of available reports and liaison with relevant stakeholders.

- Review of the background codes and regulations on a national and local scale.

- Description of the likely impacts of the proposed works, appropriate mitigation measures and the residual impacts.

- Identify and describe sensitive receptors in or surrounding the site with the potential to be affected by the development proposals.

7.12 The Flood Risk, Water Resources Management, Water Quality and Drainage chapter of the EIA will become separate chapters in themselves, but will support each other. The content for each topic is detailed below.

### Flood risk

7.13 This section will contain a description of the baseline condition, an assessment of the breach modelling results (assumed to be required at a minimum of two locations), recommendations as suggested by the TE2100, proposed flood mitigation measures and the residual flood risk of the site. Flood risks from the following sources will be assessed:

- fluvial;

- tidal;

- surface water;
- groundwater;
- sewer;
- artificial sources.

**Water resource management**

7.14 This section will describe the water strategy for the development, the demands and the sustainable strategy for water supply.

**Water quality**

7.15 This section will assess the potential effects of the development on the surrounding water environment. This will include an assessment of the potential change in water pollution.

**Drainage**

7.16 This section will contain a description of the site wide drainage (surface and foul) strategy that has been developed. The pre-development conditions will be compared to the post-development conditions.

## ASSESSMENT SIGNIFICANCE CRITERIA

7.17 The effect significance will be based on assessing the effect magnitude (i.e. the deviation from the baseline condition) and the sensitivity of the likely receptor. Professional judgement and the use of a matrix approach will determine if potential effects are considered to be significant.

7.18 It is anticipated that the project will not be subject to transboundary impacts from a Water Resources perspective at this stage, However, until consultation with major stakeholders has taken place it recommended that this not excluded from the scope.

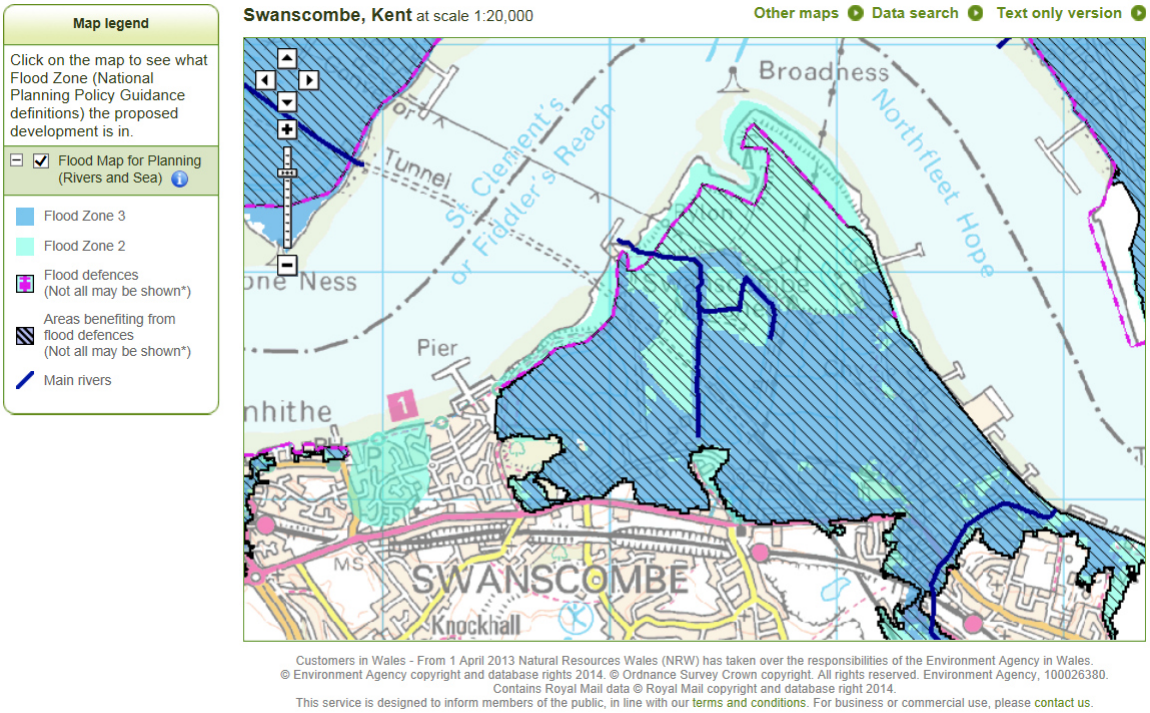
**Flood risk**

7.19 The FRA will describe the impact of the proposed development by comparison with the pre-development (the baseline) condition. In accordance with the NPPF and PPS25

before it, the development will aim to demonstrate improvements (i.e. reductions) in terms of flood risk. It will need to be demonstrated that the development not only has no adverse impact but also that improvements, where possible, are provided.

7.20 It is noted that initial proposals for the site include Hotels which are considered to be a more vulnerable landuse by the NPPF. This landuse will require an exception test to be satisfied if proposed to be located in Flood Zone 3 (southern portion of the peninsula). This would not be the case should Hotels be located in Flood Zone 2. Figure 7.1 illustrates the extents of Flood Zones 2 and 3 across the site.

**Figure 7.1: Flood zone extents**


Map legend
Click on the map to see what Flood Zone (National Planning Policy Guidance definitions) the proposed development is in.
Flood Map for Planning (Rivers and Sea)
Flood Zone 3
Flood Zone 2
Flood defences (Not all may be shown*)
Areas benefiting from flood defences (Not all may be shown*)
Main rivers
Swanscombe, Kent at scale 1:20,000
Other maps
Data search
Text only version
Broadness
Northfleet Hope
Tunnel
Pier
SWANSCOMBE
Knockhall
Customers in Wales - From 1 April 2013 Natural Resources Wales (NRW) has taken over the responsibilities of the Environment Agency in Wales.
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## Water resources management

7.21 Having established the baseline condition for water resource management the chapter will describe the strategic approach to managing water as a finite resource.

## Water quality

7.22 The potential effects on the water environment arising from the proposed development will be assessed against the baseline condition. Effects will be assessed for both the construction and operational phases of development.

7.23 Potential changes to pollution to the surface water environment will be assessed

through a qualitative based approach.

### Drainage

7.24 The London plan requires a development to achieve a betterment of 50% for peak flows of storm water run-off across the site. Additional to the requirements of the London Plan it is anticipated that the Environment Agency will expect the development to achieve a reduction in runoff above this. Thus a betterment of 50% will be considered as a minimum achievement for storm water run-off.

## POTENTIAL MITIGATION MEASURES AND RESIDUAL EFFECTS

### Flood risk

7.25 The following mitigation measures are likely to be proposed during the process of considering flood risk.

- Raising flood defences to those outlined by the TE2100.
- Providing compensatory flood storage to offset that lost as a result of the development.
- Raising floor levels of buildings in areas of higher flood risk.
- Locating more vulnerable uses in areas of lower flood risk.
- Raise ground levels across the site.
- Flood warning and evacuation management.
- Surface water drainage strategy.
- Providing means of safe access and egress during a flood event.

### Water resource management

7.26 The approach for water resource management will be based on the following:

- Adoption of demand reduction measures to minimise water demands, such as low flow taps and toilets, and;

- identification and adoption as appropriate of non-potable water sources. This may include consideration of rainwater harvesting, grey and black water recycling. Uses of non-potable water may include irrigation, cooling and non-leisure water bodies.

**Water quality**

7.27 The mitigation against an impact to water quality will be managed through co-ordination of the management of flood risk and drainage. Implementing flood risk mitigation measures as well as utilising SUDS will help to improve water quality reducing the impact that the development has on the water cycle.

**Drainage**

7.28 The use of SUDS can help to improve water quality and reduce the peak flows of surface water through attenuation. The following SUDS are likely to be considered or adopted:

- Rainwater harvesting and recycling;
- adoption of swales as part of the landscape and public realm;
- rainwater attenuation through storage in open features and / or green or brown roofs;
- bio-retention and sub-surface storage; and
- permeable paving.

# Eight ◆ Soil and ground conditions

## INTRODUCTION

8.1 The purpose of this section is to summarise the proposed scope of works for the development of the soils and ground conditions chapter of the London Paramount Entertainment Resort EIA.

8.2 This Chapter will describe the impact of the development in terms of the geoenvironmental conditions at the site, with the aim of ensuring that suitable and safe conditions are achieved for the proposed end-use. Consideration will be given to the site's conceptual model including geology, hydrology, hydrogeology and the geoenvironmental conditions (including issues associated with soil gasses, chemicals within site soils and groundwater). A range of impacts associated with the design, construction and operation of the proposed development will be considered.

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

8.3 Land contamination is regulated under several regimes, including environmental protection, pollution prevention and control, waste management, planning and development control, and health and safety legislation. The primary regulatory regimes under which contaminated land are managed in the UK are:

- National Planning Policy Framework 2012 (NPPF) (Ref 0), and;
- under Part 2A of the Environmental Protection Act 1990 (Ref 2).

8.4 The framework for the assessment of potential land contamination adopted in this assessment will be based on current guidance documents regarding the implementation of these regimes and the assessment of potentially contaminated land, with particular reference to: the Environment Agency; Model Procedures (Ref 3), Guiding Principles (GP_ on Land Contamination (Ref 4) and GP3; and the relevant British Standard (Ref 5).

8.5 Reference will also be made to regional planning policy, namely:

- The London Plan, Spatial Development Strategy for Greater London, July 2011, and;
- local policy and guidance as set out in The Borough of Dartford Local Plan 1995 [policies DL1 and DL4 saved following adoption of the Core Strategy 2011], Gravesham Borough Council Local Plan 1st Review 1994 [Policy M1 saved in the adoption of the Core Strategy, but due to be deleted].

## RELEVANT DESIGNATIONS

8.6 There are several licensed waste management facilities in the area, but none of these have been determined as 'contaminated land' under the Environmental Protection Act 1990.

## BASELINE STUDIES

8.7 A baseline assessment covering the geology, hydrology, hydrogeology and geoenvironmental conditions at the site will be provided as part of the ES chapter. Currently it is known that the natural geology across the site in the vicinity of the River Thames comprises a substantial thickness of alluvial deposits (peat, silty clays and sands & gravels) underlain at depth by the Chalk. In this area, the natural deposits are overlain by a substantial but variable thickness of Made Ground (Fill) composed of cement kiln dust (CKD). This material is generating leachate which is currently subject to active control and treatment. Away from the Thames the Chalk is present at ground level (in places overlain by the Thanet Sands) but these strata have been extensively quarried. In places the quarries have been left as unrestored land (and now form low lying areas, some with standing water bodies) and others have been filled with domestic and industrial wastes. Some of these landfills include active gas and leachate management facilities.

8.8 The detailed ground engineering baseline assessment will be carried out in two Phases: Phase 1 will comprise a desk based study of existing data and will be carried out prior to the preparation of the ES Chapter; Phase 2 will comprise intrusive investigations targeted to provide data necessary to fill information gaps identified in Phase 1 and to provide data sufficient to meet the final planning requirements. These investigation works are described in more detail below.

8.9 The Phase 1 desk study will comprise the following tasks;

- Collation and review of existing reports and data pertinent to the site and the objectives;
- determination of land use history by review of historical maps, data provided by landowner and other publicly available data (e.g. local library sources, the Internet);
- determination of ground conditions (geological, hydrogeological, geotechnical and geoenvironmental) by review of published maps (British Geological Survey), existing site investigation reports and data from the Environment Agency/other authorities;
- determination of regulatory compliance by review of public register information from local authority and Environment Agency;

- performing a desk based Unexploded Ordnance (UXO) risk assessment;

- undertaking a site walkover survey - carried out to confirm current use, to identify surrounding land uses which could impact upon the site, to determine possible constraints on any site investigations;

- preparation of a desk study report to include the construction of an Initial Conceptual Site Model, a Contamination Preliminary Risk Assessment, together with identification of the need for, nature and scope of any subsequent works (including intrusive investigation and remediation) necessary to enable safe redevelopment.

## CONSULTATIONS UNDERTAKEN TO DATE

8.10 An initial consultation has been carried out with the Environment Agency. The principal stakeholders for the disciplines outlined in this chapter are the Environment Agency (groundwater pollution and waste sections) and the local authorities' environmental health departments (contaminated land officers - CLOs). Further meetings with the Environment Agency and the CLOs will be arranged in the near future as a start to the consultation process.

## OUTLINE ASSESSMENT METHODOLOGY

8.11 The following methodology will be utilised to assess the proposed development against the baseline. A conceptual model of the site that describes its environmental features together with the expected interaction of potential contamination sources with the environment will be developed. This will be done by undertaking a *Source – Pathway – Receptor* analysis of the site in accordance with the guidance documents referred to above. These terms as defined below;

- Sources. Potential or known sources of potential contamination associated with historic or recent/ current land uses (e.g. disposal of wastes, spills and leaks).

- Pathways. Mechanisms/ systems thorough which exposure of a receptor to a contaminant could occur e.g. direct contact with contaminated soils, migration through air, over land or via permeable ground.

- Receptors. Receptors of varying sensitivity that could be adversely affected by contact (direct or indirect) with a contaminant. E.g. people living, working or visiting the site, groundwater and surface water bodies, ecological resources (flora and fauna).

8.12 Where a source, relevant pathway and receptor are present a "contaminant linkage" is created whereby there is a circumstance through which some level of environmental

harm could occur, which has to be assessed and mitigation identified as appropriate.

8.13 Baseline conditions will be assessed for the development confines and for a distance of up to 250m beyond. This 'halo' around the site boundary is considered in order to take into account the potential for off-site contamination sources and receptors.

8.14 The baseline data will sourced from a desk based study and site walkover survey together with extensive data on the geological and geoenvironmental conditions from existing site investigations and remedial activities, together with published information and existing borehole logs published by the British Geological Survey.

## ASSESSMENT SIGNIFICANCE CRITERIA

8.15 The effect significance will be based on assessing the effect magnitude (i.e. the deviation from the baseline condition) and the sensitivity of the likely receptor. Professional judgement and the use of a matrix approach will determine if potential effects are considered to be significant.

8.16 The methodology for impact prediction is based on assessing both the magnitude of the changes expected and the sensitivity of the receptors. Criteria for assessing the significance of potential human and environmental impacts will be based on a qualitative assessment of the magnitude of the impact, or how far the impact deviates from the baseline condition, and the receptor sensitivity.

8.17 The resources/receptors outlined in table 8.1 will be considered in the assessment. It is not anticipated that these resources/receptors will all be significantly affected but it is necessary to demonstrate that these important receptors have been considered. Incorporation of mitigation such as personal protective equipment (PPE) and the health & safety regime for construction workers will address the majority of any potential health risks associated with the development itself. The main potential effects arising from land contamination at the site, prior to the incorporation of mitigation measures are also identified in

**Table 8.1: Resources / Receptors and potential effects**

| Receptor | Effect |
|---|---|
| Construction Workers | Direct or indirect ingestion of contaminated soil and groundwater, inhalation, dermal contact.<br>Inhalation of asbestos fibres during building demolition/ earthworks. |
| Future Site Users (residents/workers/visitors) | Direct or indirect ingestion of any residual contaminated soil, inhalation of contaminated dusts and/ or hazardous fibrous substances, dermal contact.<br>Concentration of flammable or asphyxiating ground gases and vapours in enclosed spaces. |

| Receptor | Effect |
|---|---|
| | Inhalation of vapours indoors and outdoors. |
| Surrounding Land Users (neighbours) | Inhalation or deposition of wind-borne contaminated dusts and/ or hazardous fibrous substances [mainly during construction but also in operation].<br>Migration of contamination (including vapours) via permeable strata and in air. |
| Controlled Waters (groundwater and surface waters) | Contamination of water resources.<br>Reduction in water quality.<br>Impacts to aquatic environment. |
| Ecology | Phytotoxic impacts on plant species.<br>Toxic impacts on fauna.<br>Indirect impacts on aquatic flora and fauna via contamination of water resources. |
| Built Environment | Chemical attack on buried concrete structures.<br>Permeation of plastic pipelines and contamination of water supply. |

8.18 Receptors are considered to have varying degrees of sensitivity to contamination potentially present beneath the site, based on the potential scale of exposure and the integrity of any site specific exposure pathways. The scale of receptor sensitivity is defined n table 8.2.

**Table 8.2: Criteria for determining receptor sensitivity**

| Sensitivity | Description |
|---|---|
| High | People (on site or on neighbouring properties) occupying land in residential use with gardens or using allotments, children's play areas etc.<br>Construction workers engaged in extensive earthworks.<br>Major aquifer of regional importance used for potable water supply. Highly ecologically sensitive watercourse or water bodies.<br>Nationally or internationally designated ecological sites.<br>Buildings of high historic or local importance. |
| Moderate | People (on site or on neighbouring properties) occupying land in residential use without gardens, or using public areas of soft landscaping / open spaces.<br>Construction workers engaged in moderate earthworks.<br>Minor aquifer, local watercourse or non-designated water bodies not used for large scale human consumption which can be used for industrial purposes; may be important for local recreational purposes.<br>Locally designated ecological sites.<br>Buildings, including services and foundations. |
| Low | People (on site or on neighbouring properties) occupying or using commercial or industrial buildings, car parking, hard landscaping. |

| | |
|---|---|
| | Construction workers site but with minimal disturbance to the ground.<br>Non-potable water resources, water body of low recreational qualities.<br>Sites of low ecological value, and flora and fauna occupying non-designated open areas.<br>Infrastructure (e.g. roads, highways and railways). |
| Very Low | Land with no access to people and no neighbouring properties.<br>Construction workers on site, but with no disturbance to the ground on site.<br>Non-aquifer, no nearby watercourses or water bodies within 1km.<br>No sites of significant ecological value and no built development within 1km. |

8.19 The criteria used to assess the magnitude of effects will be based on a qualitative assessment of the potential seriousness of the effect or how far the effect deviates from the baseline condition and the period of time that the effect could last as shown in Table 8.3.

**Table 8.3: Criteria for determining effect magnitude**

| Magnitude | Description |
|---|---|
| Large | Short term (acute) or long term (chronic) adverse effects on human health, broadly equivalent to "significant harm" as defined by the Environmental Protection Act 1990).<br>Persistent and extensive pollution of water resource or ecosystem equivalent to Category 1 pollution incident (major pollution release).<br>Catastrophic damage to crops / building / infrastructure. |
| Medium | Short term (acute) or long term (chronic) adverse effects on human health but not equivalent to "significant harm" as defined by the Environmental Protection Act 1990).<br>Non-persistent pollution of water resource or ecosystem equivalent to Category 2 pollution incident (moderate pollution release).<br>Significant damage to crops / buildings / infrastructure (on or off site).<br>Contamination of off-site soils. |
| Small | Easily preventable, non-permanent health effects on humans.<br>Minor, low-level, localised, temporary pollution of water resources or ecosystem.<br>Easily repairable damage to crops / buildings / infrastructure.<br>Easily preventable, permanent health effects on humans.<br>Localised damage to buildings / infrastructure (on or off site). |
| Negligible | No discernible negative effects. |

8.20 The combination of the sensitivity of the receptor and the magnitude of the impact will provide an indication of the level of contamination on the site, and the nature and severity of possible effects. It should be noted that both rankings may vary in accordance with the different scenarios being considered (i.e. baseline, construction and operation).

8.21 Positive or negative effects during construction and when the site is operational will be

identified. The positive effects are associated with the mitigation of risks associated with contamination. The negative effects are temporary during the construction phase and relate to the increased potential for contaminant exposure (e.g. from the generation of contaminated dusts) and long term from the use of the site during the operational phase (and any residual contamination if remediation was inadequate or not carried out).

## POTENTIAL MITIGATION MEASURES AND RESIDUAL EFFECTS

8.22 The following mitigation measures are likely to be proposed during the process of considering risks associated with soil and ground conditions.

- Detailed site investigations, sampling, monitoring and risk assessments which will inform the Remedial Strategy.
- The preparation of a Code of Construction Practice which will set out the procedures for the protection of human health, controlled waters, flora, fauna and the built environment.
- Definition and implementation of an appropriately rigorous health and safety regime for all construction workers involving below ground activity.
- Adoption of good construction practice to prevent the migration of contamination via air (as dust or vapour) and water (surface water run off or via permeable strata).
- Design and construction of gas protection measures to new buildings and structures and to ensure continued performance of existing landfill gas control systems.
- Undertaking a Foundation Works Risk Assessment to inform foundation solutions and ensure mitigation of risk to groundwater quality.
- Particular remedial action (treatment, isolation of removal) of any areas of gross contamination.
- Implementation of appropriate precautions to protect any below ground activity against unexploded ordnance.
- Design and construction of below ground structures against aggressive ground conditions.
- Provision of appropriate thicknesses of suitable sub soil; and tops soil in areas of gardens and soft landscaping/ areas of public open space.
- Preparation of Verification Report(s) to demonstrate that the remedial actions have been carried out in accordance with the Strategy and accordingly that construction

activities have not given rise to unacceptable risks to people or the environment in both short and long term.

8.23 It is anticipated that provided the above precautionary approach is adopted and an appropriate remedial strategy defined and agreed there should be no significant residual effects.

## REFERENCES

1. Department for communities and local government. National Planning Policy Framework. March 2012.
2. H M Government. The Environmental Protection Act, 1990.
3. Department for Environment Food and Rural Affairs / Environment Agency. Model Procedures for management of land contamination (CLR11), 2004.
4. Environment Agency. Guiding Principles for land contamination, 2010.
5. British Standard Institute. Investigation of potentially contaminated sites – Code of Practice (BS10175:2011), 2011.

# Nine ◆ Transport and access

## INTRODUCTION

9.1 This Chapter will examine the environmental effects of the traffic and transport issues associated with the proposed development which should be considered alongside other documents such as the Transport Assessment (TA) and Travel Plan, the scope of which will be determined through discussions with the Kent County Council (KCC), the Highways Agency (HA) and influenced by other highway/transport authorities such as Transport for London.

9.2 As part of the Transport Assessment a series of Technical Notes will deal with issues such as travel demand, transport mode share, trip distribution, transport modelling amongst other things. Across the year visitor travel demand will average around 41,000 per day but will vary classified in more detail within the TA, A Design Day (broadly representing a neutral (Spring & Autumn) day)), will form the basis of assessment agreed with the Highway Authorities. Taking account of a mix of UK (60%), European (30%) and International (10%) visitors the current indicative forecast visitor numbers (subject to further analysis and revision) are summarised in Table 1.

**Table 1: Visitor Travel demand and mode shares**

| **Transport Mode** | **Forecast Mode Share** | **Peak hour demands (typically 10-11am and 7-9pm)** | | | |
|---|---|---|---|---|---|
| | | Design Day | | High Day | |
| | | Persons | Vehicles* | Persons | Vehicles* |
| Private Vehicle | 58% | 7,837 | 2,449 | 13,943 | 4,357 |
| PT - Rail | 24% | 3,216 | 43 | 5,722 | 76 |
| PT Bus | 4% | 500 | 10 | 889 | 18 |
| Drop-off/Park and Ride | 1% | 176 | 55 | 313 | 98 |
| Coach passengers | 5% | 703 | 14 | 1,250 | 25 |
| Water Taxi | 2% | 324 | ~2 | 577 | 3 |
| Other/Motorcycle | 2% | 81 | 74 | 144 | 131 |
| On-site Hotel Guests | 5% | 676 | - | 1,202 | - |
| Total | 100% | 13,511 | 2,646 | 24,040 | 4,708 |

*vehicles in some cases relate to rail carriages or additional water craft

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

9.3 Reference will be made to national and local planning policy including the following:

**National policy**

- National Planning Policy Framework (NPPF), March 2012;
- National Planning Practice Guidance (NPPG), March 2014;
- Consultation on a Draft National Policy Statement for the National Road and Rail Networks, December 2013.
- The National Policy Statement for Ports, 2012;
- National road and rail networks: draft national policy statement, 2013

**Regional and local policy**

- The Mayor's Transport Strategy, May 2010;
- Thames Strategy East, 2008;
- River Action Plan, 2013.
- KCC "Local Transport Plan for Kent 2011 – 16" (April 2011);
- KCC "Rail Action Plan" (April 2011);
- KCC "Growth without Gridlock" (December 2010).

9.4 The methodology for assessing the proposed development's traffic and transport effects will also reflect the following documents:

- DfT's Guidance on Transport Assessment, March 2007;
- Design Manual for Roads and Bridge (DMRB);
- WebTAG (Transport Analysis Guidance) and,
- IEMA's Guidelines for the Environmental Assessment of Road Traffic,1993.

9.5 When considering other development and infrastructure commitments in line with

WebTAG consideration will be given to the PINS Advice Note 9: *Rochdale Envelope*.

## RELEVANT DESIGNATIONS

9.6 A number of relevant improvements to the trunk road network have been identified below:

- A range of M25 junction improvements and motorway widening projects have occurred in the last decade, including Section 1and 4 of the M25 Junctions 16-23 (M40 to A1) and 27-30 (M11-A3) completed for the Olympics;
- Further improvements are planned in the sub-region including the M25 Widening, Junction 5-7 (Sevenoaks to M23)- circa 2013/14;
- M25 Junction 23-27 (A1(M) to M11)- circa 2013/2014;
- M25 Junction 30/A13- circa 2015/2016;
- Improvements to the M23/A23 corridor
- Managed motorways on the M25 approaches for the M3 and M4 corridors et al;
- A2/M25 Interchange (Junction 2)
- In addition, a number of relevant improvements to the London transport network have been identified:
- Potential Gallions Reach Ferry- a vehicle between Thames mead and Beckton, earliest delivery 2017;
- Silvertown Tunnel – a new road tunnel between Greenwich and Silvertown, earliest delivery 2021;
- Thames river crossings in the Thames Estuary;
- A number of relevant improvements to the strategic and local transport network have been identified:
- The completed A2 Bean-Cobham improvements;
- A2 Watling Street/B255 Bean (Bluewater) Interchange;
- A2 Watling Street/B259 (Ebbsfleet) Interchange;

- A2 Watling Street// B262 Interchange (Pepperhill Junction)

9.7 Further details on the improvement works will be detailed in the Transport Assessment.

## BASELINE STUDIES

9.8 The IEMA Guidelines set out the following rules which will be applied to identify those highway links that will form part of the assessment:

**Rule 1:** include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%).

**Rule 2:** include any other specifically sensitive areas where traffic flows have increased by 10% or more.

9.9 At this juncture, taking account of the sensitivity to traffic changes for air quality (+/-5%) and the potential magnitude of traffic flow changes at some times of the day, an initial study area including *87* road links has been identified, shown on the attached figures 9.1 and 9.2. Only those links that meet the IEMA rules will be considered in detail within the Transport Chapter but these links can only be identified once the transport modelling has been completed.

9.10 Baseline studies will be undertaken in conjunction with the Transport Assessment Scope and considered relative to other guidance (WebTAG), cross referenced in the relevant Chapter. The selection of future year (2025) scenarios is based on a forecast year around five years after planned opening. The assessment scenarios are considered in line with the Strategic Modelling Methodology Technical Note. The forecast year assessment will include schemes and developments that are committed or highly likely, consistent with the WebTAG uncertainty log presented in Table 2.

9.11 A further design year horizon will consider the 'without development' assessment (scenario) for a consistent year.(2025) to examine the effects of a range of baseline transport conditions and identify those transport links that are sensitive to material changes in demand.

9.12 A sensitivity test will consider the potential effects of the Lower Thames Crossing – Option C[36]. In the event that other sensitivity tests are identified during the pre-application stage these may be considered as part of the EIA.

[36] Option A follows the line of the existing M25 and Option B has been discounted by the Department for Transport .

**Table 2: Development and infrastructure uncertainty log**

| Probability | Description | Status |
|---|---|---|
| **Near certain** | The outcome will happen, or there is a high probability that it will happen | • Intent announced by proponent to regulatory agencies<br>• Approved development proposals<br>• Projects under construction |
| **More than likely** | The outcome is likely to happen, but there is some uncertainty | • Submission of planning or consent application imminent<br>• Development application within the consent process |
| **Reasonably foreseeable** | The outcome may happen, but there is significant uncertainty | • Identified within a development plan<br>• Not directly associated with the transport strategy/scheme, but may occur if the transport strategy/scheme is implemented<br>• Development conditional on the transport strategy/scheme proceeding<br>• A committed policy goal, subject to tests (e.g. of deliverability) whose outcomes are subject to significant uncertainty |
| **Hypothetical** | There is considerable uncertainty whether the outcome will ever happen | • Conjecture based on currently available information<br>• Discussed on a conceptual basis<br>• One of a number of possible inputs in an initial consultation process<br>• A policy aspiration |

## CONSULTATIONS UNDERTAKEN TO DATE

9.13 The traffic and transport issues associated with the proposed development should be considered alongside other documents such as the Transport Assessment and Travel Plan, the scope of which will be determined through discussions with KCC/ HA, their consultants, and others. As the HA is advancing planned improvements to the A2 Bean and Ebbsfleet junctions consultations have taken place to align the programme of assessments for both the NSIP proposals and those being developed for the HA to ensure evidence bases are fairly consistent.

9.14 WSP has been involved in discussions with both the HA and KCC since Spring 2014 and have opened dialogue with Transport for London (TfL) to review potential effects on other parts of the Strategic Transport Network. A series of stake-holder and public consultations in respect of the proposed development generally are taking place between 3-15 November 2014, which will seek views on transport issues.

## OUTLINE ASSESSMENT METHODOLOGY

9.15 Based on the IEMA's *Guidelines for Environmental Assessment of Road Traffic* the majority of transport effects are indirect impacts on levels of human amenity, typically as road users, where the development effects may change travel patterns.

9.16 For the wider study area the period of assessment will consider changes in terms of Average Annual Daily Total (AADT) or Average Annual Weekday Total (AAWT) in line with the respective assessment guidance outlined below. Given the nature of the leisure use some local transport links may be assessed in greater detail to consider seasonal or daily changes during specific periods or hours such summer months, night-time noise or the development peak hours (typically 7-9pm).

9.17 Severance can be a physical or perceived separation within a geographic area. It is described in the Design Manual for Roads and Bridges (DMRB) Volume 11 as "*the separation of residents from facilities and services they use within their community caused by new or improved roads or by changes in traffic flows*". The assessment of severance pays full regard to specific local conditions, in particular the location of pedestrian (and other non-motorised user (NMU)) routes to key facilities and whether or not crossing facilities are provided. Some of the assessment area includes part of the motorway network where NMU movements are illegal and thus will not be considered.

9.18 Driver stress incorporates an element of amenity in terms of view and relative need for attention to possible risks. Effectively this is a qualitative assessment of the driving environment. In an urban environment the risks are normally greater; therefore driving can be more stressful and require greater cognition. Rural environments generally require less attention to driving conditions and therefore provide opportunities to enjoy the driving environment. Driver stress can also be assessed more quantitatively by taking account of traffic conditions across the day and the ability for drivers to choose their speed and overtake slower vehicles. The DMRB (Volume 11 Section 3) provides some indication of the effects of driver stress resulting from flows and typical speeds. The DMRB will be used to define and, associated Local Transport Notes for local roads, to form the basis for assessment where the transport model could be used to estimate typical speeds on links.

9.19 There are few quantitative measures of pedestrian / cycle (or NMU) delay. The IEMA guidelines recommend that, rather than relying on thresholds of pedestrian (or NMU) delay, the assessor should use his/her judgement to determine whether there is a significant effect to pedestrian delay. The DMRB references research on pedestrian crossing behaviour and delays at a number of controlled and uncontrolled crossing points. These research studies along with potential requirements for improvements outlined in the DMRB, and associated Local Transport Notes, will form the basis for assessment.

9.20 The IEMA guidelines broadly define pedestrian /cycle (or NMU) amenity as the 'relative

pleasantness of a journey'. It is affected by traffic flow, traffic composition, footway, cycleway or Bridleway width and separation from traffic. A common threshold for changes in NMU use is where traffic flow is either halved or doubled. In areas where traffic flows increase significantly it may be more appropriate to provide dedicated or improved NMU infrastructure or reduce traffic speeds. These potential requirements for improvements outlined in the DMRB and, associated Local Transport Notes, will form the basis for assessment. Where appropriate existing public rights of way (see figure 13.1) will be preserved or enhanced but the proposals may include some diversions which will be identified through the pre-application consultation.

9.21 The IEMA guidelines state that an assessment of Personal Injury Accident (PIA) rates should be undertaken using recent data. The assessment can be supplemented using national statistics that relate to accident rates per vehicle kilometres. The assessment of effect significance should be based on professional judgment, accounting for local circumstances and factors that may elevate or lessen the accident risks. Data for a recent 3-year period will be used to inform the baseline assessment.

9.22 Construction traffic is a temporary transport effect and will be significantly lower than the development traffic, thus the effects tend to be less significant. The volume of traffic will also depend heavily on the rate of delivery and the triggers for delivering part of the community infrastructure. As the preferred main contractor will not be identified until later in the planning process various assumptions will be made in a Draft Construction Logistics Plan considered with the application. It is envisaged that the Construction Logistics Plan will be subject to a planning condition. Once a main contractor is identified the Construction Logistics Plan will be finalised and, with a Statement of Conformity, will review material changes that might occur.

## ASSESSMENT SIGNIFICANCE CRITERIA

9.23 Guidelines detailed within the Institute of Environmental Management and Assessment's (IEMA) *Guidelines for Environmental Assessment of Road Traffic* (1993) will be employed for this Chapter. IEMA's *Guidelines for Environmental Assessment of Road Traffic* provides a range of human and natural effects from traffic, it defines that those should be regarded as a material consideration and then considers the weight to which those effects should be defined. The Guidelines set out, inter alia, the following recommended list of environmental effects which could be considered as potentially material or significant whenever a new development is likely to give rise to changes in traffic flows:

- severance;
- driver stress and delay;
- pedestrian and cycle (or NMU) amenity;
- accidents and safety;

- construction traffic.

9.24 The noise, visual and air quality effects of new transport infrastructure will be considered elsewhere in the environmental assessment.

9.25 The significance of an effect is determined by the interaction of two factors, first, the magnitude, scale or severity of the effect of change; and, second, the value, importance or sensitivity of the environmental resource being affected.

9.26 Sensitive receptors are not defined in the IEMA Guidelines but are considered to include conservation areas, schools, formal open spaces, sheltered housing for the elderly or other locations where the populous are more likely to be sensitive to the amenity and other in-direct effects of traffic, such as crossing the road. Shown in Table 2 are multiple sensitive receptors grouped on a scale of negligible to major, in order to ascertain key links with particularly sensitive receptors. In response to this scoping opinion, planning authorities may propose additional sensitive receptors or identify those areas which they consider more or less sensitive.

**Table 4: Receptor sensitivity in relation to magnitude of impact**

| Receptor Sensitivity | Magnitude of Impact |
|---|---|
| **Major** | Receptors of greatest sensitivity to traffic flow; schools, colleges, playgrounds, accident blackspots, retirement homes, urban/residential roads without footways that are used by pedestrians. (Paragraph 2.5 IEMA Guidelines, 1993) |
| **Moderate** | Traffic flow sensitive receptors including: congested junctions, doctor's surgeries, hospitals, shopping areas with roadside frontage, roads with narrow footways, unsegregated cycleways / NMU Infrastructure, community centres, parks and recreation facilities. |
| **Minor** | Receptors with some sensitivity to traffic flow: places of worship, public open space, nature conservation areas, listed buildings, tourist attractions and residential areas with adequate footway provision. |
| **Negligible** | Receptors with low sensitivity to traffic flows and those sufficiently distant from affected roads and junctions. |

9.27 The IEMA Guidelines notes that the most discernible environmental effects are 'noise, severance, pedestrian delay and intimidation'. As much of the development will involve increases in traffic on motorways and railways, thus with the exception of noise (and air quality), the effects of severance, pedestrian delay and intimidation already exist and thus the magnitude of change is less likely to be sensitive. Generally, the magnitude of

change necessary for the transport effect to be considered material will be lower for sensitive receptors. Table 3 considers how the magnitude may be described in the Assessment.

**Table 5: Severity of different magnitudes of effect**

| Sensitivity of Receptor | Magnitude of effect | | | |
|---|---|---|---|---|
| | **Major** | **Moderate** | **Minor** | **Negligible** |
| **Major** | Major | Major | Moderate | Minor |
| **Moderate** | Major | Moderate | Minor | Negligible |
| **Minor** | Moderate | Minor | Negligible | Negligible |
| **Negligible** | Minor | Negligible | Negligible | Negligible |

9.28 There are few areas where roads pass such sensitive receptors but this approach, considering the anticipated magnitude of impact, has been used to identify a study area of *68* links on the strategic or major roads surrounding the site and *19* on the local roads, totalling *87* links for assessment, shown on the attached figures 9.1 and 9.2. Within these areas some locations have been considered to incorporate highway links which include some sensitive receptors. The scoping opinion is intended to identify if these are representative or identify where additional links might be necessary. Whilst the assessment criteria may be slightly different it is expected that these same links will be used for noise and air quality assessments.

9.29 The degree of both positive and negative development effects, including temporary and permanent, will be summarised within this chapter, adopting a consistent approach based on level of effect identified, set out as follows:

- Substantial – A change in total traffic or HGV flows of greater than 90% compared to the forecast baseline traffic flows;
- Moderate – A change in total traffic or HGV flows of between 30 and 60% compared to the forecast baseline traffic flows;
- Slight – A change in total traffic or HGV flows of between 30 and 60% compared to the forecast baseline traffic flows; and
- Negligible – A change in total traffic or HGV flows of less than 30% compared to the forecast baseline traffic flows.

9.30 The Guidance for Transport Assessment indicates that a forecast year five years after application would normally be acceptable. At this stage the assessments year scenarios are reported indicatively as follows unless otherwise agreed with KCC/PINS as part of the Transport Assessment Scope:

- Baseline (2014);
- Construction traffic peak year (2018);
- Design Year Horizon (2025) with cumulative effect of other development and infrastructure commitments;
- Design Year Horizon (2025) with London Paramount development; and
- Design Year Horizon (2025) cumulative effects of development with Lower Thames Crossing (Option C).

9.31 Whilst the EIA Regulations requires assessments to consider the development with and without mitigation, it is considered that each of the forecast scenarios will include transport infrastructure and service improvements in line with the Transport Assessment scope thus some mitigation measures will be integral to the proposals.

9.32 At this stage it is envisaged that the development will result in additional water ferries on the River Thames and potentially some increased rail service frequencies during certain times of the year. In response to this scoping opinion, planning authorities may propose additional assessments of these effects on noise, vibration, air quality or other effects.

9.33 The development may also have some effects on other modes of transport such as other water (cruise liners and freight) and air travel. It is considered that the effect of additional travel by other water and air craft will be considered as part of the Environmental Assessments of other air and water port infrastructure thus any development effect is considered to be indirect. In response to this scoping opinion, relevant planning authorities may propose a different approach and direct the assessment accordingly.

## POTENTIAL MITIGATION MEASURES AND RESIDUAL EFFECTS

9.34 The assessment of development effects in line with the EIA Regulations tends to require the mitigation to be considered separately, i.e. the development effect is considered and assessed and then the development effect with mitigation is assessed. As transport volumes may be affected by the capacity of the transport network this is not always practical. The KCC Local Transport Plan Congestion Strategy seeks to manage this.

9.35 The IEMA Guidelines suggest that associated "*…mitigation measures should be considered as a complete package*" however for the purposes of the assessment chapter mitigation will be considered in two parts, those infrastructure improvements that are considered necessary to meet capacity needs of the development (and therefore considered as part of the Transport Assessment) and those additional (environmental)

mitigation measures that meet the collective needs of the development.

9.36 The contribution of these additional mitigation measures will form part of the assessment and considered to inform the residual development effects once traffic and other data is available.

9.37 These mitigation measures could include a Construction Logistics Plan, Delivery and Servicing Plan, bus services, the Travel Plan, NMU crossings, new or improved NMU routes and traffic management measures intended to preserve or enhance the amenity of road users.

9.38 Adopting this approach the determination of the 'cumulative' assessment will be agreed with PINS and the planning authorities as part of the Transport Assessment Scope based on the London Thames Crossing transport model. Consequently the cumulative effects of network traffic growth and some developments identified in the Local Plan would normally be considered in the Lower Thames Crossing Transport model, such that the forecast baseline conditions will reflect some cumulative effect conditions.

9.39 Notwithstanding the Planning Authorities Strategic Environmental Assessments, where developments may rely on the delivery of transport infrastructure that is not designed to an advanced stage such that the mitigation of that development cannot be relied upon, it may be that such development(s) and infrastructure cannot be considered as part of this assessment and will be reviewed at a later date.

## POTENTIAL TRANSBOUNDARY EFFECTS

9.40 There are few areas where roads pass sensitive receptors but this approach, considering the anticipated magnitude of effect, has been used to identify a study area of *68* links on the strategic or major roads surrounding the site and *19* on the local roads, totalling *87* links for assessment, shown on the attached figures 9.1 and 9.2. Within these areas some locations have been considered to incorporate highway links which include some sensitive receptors.

9.41 On a typical day around 16,000 visitors to the Paramount Entertainment Resort will be from overseas, however many of these will already be visiting the UK and would be staying in the region anyway. Based on a robust forecast of new visitors trips to the UK generated by the development on any day it might be reasonable to estimate that around 16 additional planes might be generated to accommodate the development visitors on a typical day. This equates to less than 0.5% of the air traffic into London Airports and would not be material. Of course any assessment of additional tourism into the UK would be considered as part of the travel demands related to air and other ports as part of the expansion of such infrastructure but is considered negligible for the purposes of this assessment.

9.42 The scoping opinion is intended to identify if these are representative or identify where

additional links might be necessary. Whilst the assessment criteria may be slightly different it is expected that these same links will be used for noise and air quality assessments.

## TOPICS SCOPED OUT FOR FURTHER ASSESSMENT

9.43 Air and (sea based) water traffic has been scoped out of this assessment. The development is likely to result in some increases in water craft on the Thames which will be examined as part of this assessment although the extent to which this might be material or have material effects will need to be reviewed in the absence of any formal guidance.

9.44 At this juncture there is insufficient forecast information to inform the extent of baseline assessment thus it is not possible to formally scope out sections of the road and rail network , however it is considered that formal areas of assessment will be scoped out, in accordance with the IEMA Guidelines utilising the following that rules are applied to set the limit and extent of the assessment:

**Rule 1:** include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%).

**Rule 2:** include any other specifically sensitive areas where traffic flows have increased by 10% or more.

# Ten ◆ Air quality

## INTRODUCTION

10.1 This chapter considers the potential air quality impacts associated with the proposed development. Poor air quality can affect human health as well as the built and natural environment.

10.2 Direct and indirect emissions associated with the proposed development will have the potential to affect local air quality during both construction and operation. The proposed study area for assessment will be onsite, in the vicinity of the site, and along the wider road network leading to the site. Sensitive[37] receptors likely to be affected include:

- residential properties in the vicinity of the site;
- residential properties located along roads leading to the site; and
- ecologically sensitive designated sites, including Darenth Wood Site of Special Scientific Interest (SSSI) (see figure 10.1).

10.3 Construction activities will give rise to dust and $PM_{10}$ emissions which will have the potential to affect local air quality. Traffic generated during construction and operation will give rise to nitrogen oxides (NOx) and $PM_{10}$ emissions which will also have the potential to affect local air quality.

10.4 While the energy strategy for the site is not yet decided it is considered likely that it will include an energy centre. Emissions from the energy centre have the potential cause significant effects on future onsite receptors as well as existing receptors in the surrounding area.

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

10.5 The assessment will take into account the following:

- The 2008 Ambient Air Quality Directive.
- The National Air Quality Strategy.
- Part IV of the Environment Act 1995.

[37] Air quality sensitive receptors include residential properties, hospitals, schools, nurseries and care homes.

- Local Air Quality Management (LAQM) Technical Guidance (2009).
- The National Planning Policy Framework.
- Gravesham Borough Council's Local Plan Core Strategy.
- Kent and Medway Air Quality Partnership - Air quality and planning technical guidance.
- Dartford Borough Council's Local Development Framework.

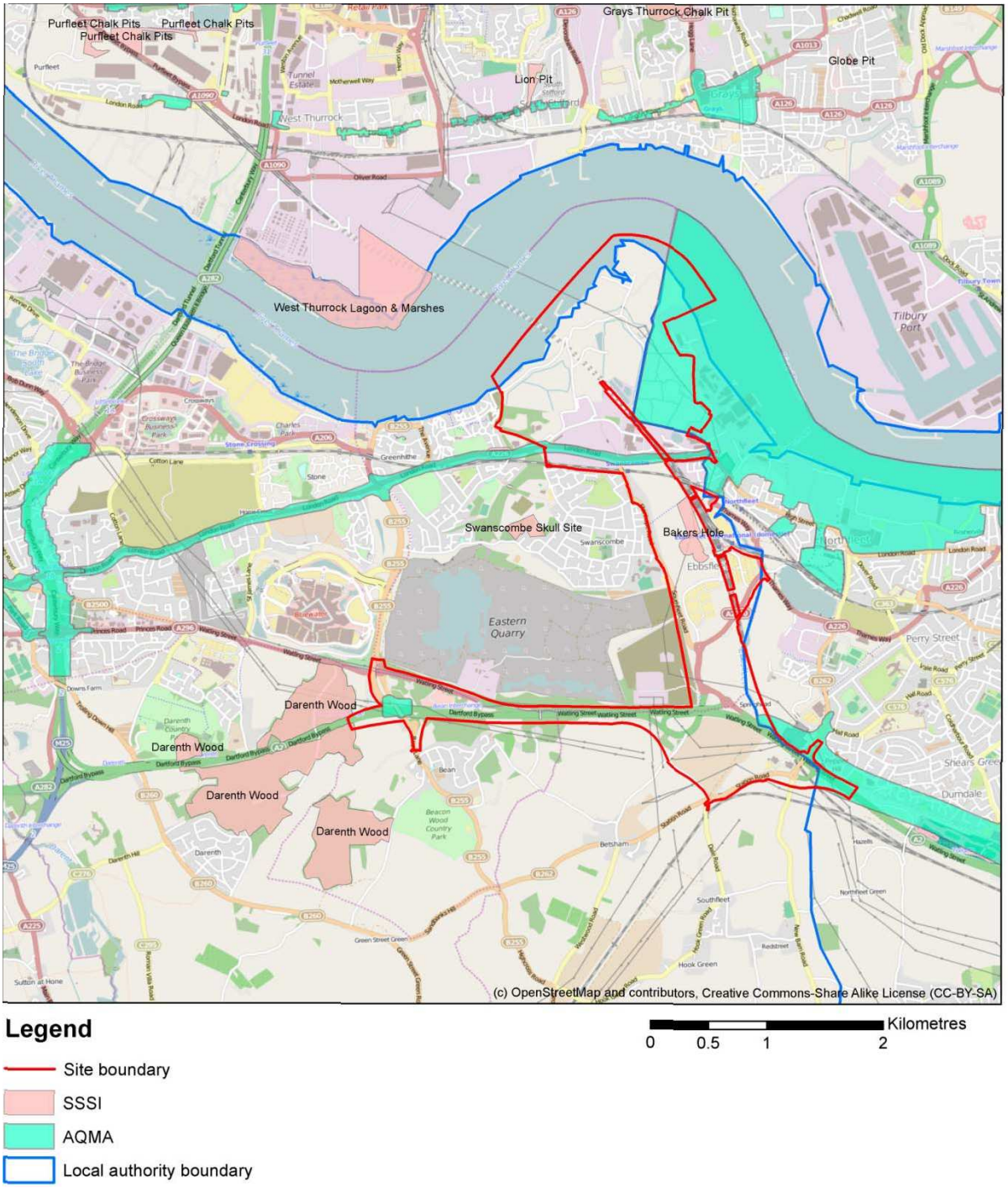
## BASELINE STUDIES

10.6 Both Gravesham and Dartford Borough Council have declared a number of Air Quality Management Areas (AQMAs) for exceedences of National Air Quality Objectives (NAQOs). The nearest AQMAs to the proposed development are the Northfleet Industrial Area AQMA in Gravesham, declared for exceedences of nitrogen dioxide ($NO_2$) and particulate matter ($PM_{10}$); and Dartford AQMA No. 2, declared for exceedences of $NO_2$. Locations of AQMAs in relation to the site are shown in figure 10.1.

10.7 Further baseline data will be gathered from the following sources and reported on as part of the ES chapter:

- Dartford's air quality review and assessment reports and monitoring data;
- Gravesham's air quality review and assessment reports and monitoring data;
- consultation with environmental health officers; and
- Defra air quality background maps.

**Figure 10.1: Location of the proposed site in relation to AQMAs and SSSIs**



## CONSULTATIONS UNDERTAKEN TO DATE

10.8 No consultation has been carried out to date. Consultation will be carried out with relevant stakeholders who will include the Local Authorities and Environment Agency.

## OUTLINE ASSESSMENT METHODOLOGY

10.9 Construction activities will give rise to dust and $PM_{10}$ emissions which will have the potential to affect local air quality. Traffic generated during construction will give rise to nitrogen oxides (NOx) and $PM_{10}$ emissions which will also have the potential to affect local air quality. Impacts during the construction phase of development will be assessed using the Institute of Air Quality Management's (IAQM) guidance on the assessment of dust from demolition and construction. This guidance provides a qualitative methodology for assessing the potential air quality impacts from various site construction activities (earthworks, demolition, construction and trackout) and provides site specific mitigation measures to minimise these potential impacts. Construction impacts can occur up to 350m from the site boundary, and therefore receptors within this distance will be considered in the assessment.

10.10 Traffic generated during operation will give rise to nitrogen oxides (NOx) and $PM_{10}$ emissions which will have the potential to affect local air quality. If some form of onsite energy centre is proposed this could also give rise to emissions which will have the potential to affect local air quality. Operational impacts will be assessed by considering both traffic-related emissions and emissions from any proposed energy centre. The air dispersion model ADMS-Roads will be used to predict the impacts of emissions on pollutant concentrations at nearby receptors as a result of the proposed development.

10.11 The assessment will consider traffic-related pollutants (NOx and $PM_{10}$) and emissions associated with the energy centre. Concentrations of $NO_2$ and $PM_{10}$ will be predicted at sensitive receptors, whilst nitrogen deposition and NOx concentrations will be considered at designated ecological protection sites.

10.12 Concentrations of pollutants will be forecast at nearby receptors for the following scenarios:

- existing baseline year;
- do nothing: future baseline without development; and
- do something: future baseline with development.

10.13 Receptors will be assessed at worst case locations, for example at junctions along the road network.

10.14 A comparison of results in future 'Do Nothing' and 'Do Something' scenarios will allow the effect of the proposed development to be determined. The cumulative effects of committed developments will be taken into consideration in both future scenarios.

10.15 Assessment will also consider the introduction of new receptors into an existing area of poor air quality.

10.16 The most recent met data will be used for the dispersion modelling, whilst the use of appropriate background concentrations will be agreed with the environmental health officer.

10.17 Cumulative effects will be assessed, with traffic data taking into account committed developments. Other proposed developments/activities which may have a cumulative effect upon local air quality will be considered following consultation with relevant stakeholders.

## ASSESSMENT SIGNIFICANCE CRITERIA

10.18 Results will be considered in relation to relevant NAQOs and EU limit values. Effect significance will be determined in accordance with the IAQM's significance criteria and also the impact from energy centre emissions will be assessed using Environment Agency industrial emissions significance criteria. Predicted nitrogen deposition will be compared with critical loads as defined by the Air Pollution Information System (APIS), and significance will be assessed in line with Environment Agency guidance on Habitats Regulations.

## POTENTIAL MITIGATION AND RESIDUAL EFFECTS

10.19 Potential mitigation options include the use of mechanical ventilation in areas of poor air quality, the strategic positioning of energy centre stacks in order to minimise impacts on receptors, the use of emission abatement technology for energy centre plant, and specification of emissions standards for vehicles in operation by the developer. Residual effects will be considered post-mitigation.

## POTENTIAL TRANSBOUNDARY EFFECTS

10.20 It is considered that there will be no potentially significant transboundary effects in EEA states as a result of the development.

## TOPICS SCOPED OUT OF FURTHER ASSESSMENT

10.21 There have currently been no topics scoped out with regards to the air quality assessment.

# Eleven ◆ Noise and vibration

## INTRODUCTION

11.1 This Chapter of the Environmental Statement (ES) assesses the likely significant effects of the development with respect to Noise and Vibration. It describes the methods used to assess the potential impacts and summarises:

- the existing baseline noise and vibration conditions at the site and surrounding area;
- the mitigation measures required to reduce and prevent any potential impacts;
- reduce or offset any significant negative effects; and
- the likely residual effects after these mitigation measures have been adopted.

11.2 The potential for impacts has been considered during the construction and operational phases of the development.

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

### National planning policy

#### *National Planning Policy Framework (NPPF)*

11.3 The NPPF (Department for Communities and Local Government (DCLG), 2012) states;

*'the planning system should contribute to and enhance the natural and local environment by preventing both new and existing development from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of noise pollution'*.

11.4 Therefore planning policies and decisions should aim to:

- avoid noise from giving rise to significant adverse impacts on health and quality of life as a result of new development;
- mitigate and reduce to a minimum other adverse impacts on health and quality of life arising from noise from new development, including through the use of conditions;
- recognise that development will often create some noise and existing businesses

wanting to develop in continuance of their business should not have unreasonable restrictions put on them because of changes in nearby land uses since they were established; and

- identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

11.5 In order to deliver sustainable development, NPPF states;

*'to help economic growth, local planning authorities should plan proactively to meet the development needs of business and support an economy fit for the 21st century'.*

**Local planning policy**

11.6 This development is a Nationally Significant Infrastructure Project (NSIP) which is not subjected to local authorities consent, but only by the government evaluation.

11.7 The only local regulation that can be considered as a guide to control noise nuisance is:

*'Memorandum of Understanding between listed pollution control (noise) Local Authority services within Kent and Kent County Council highway services in relation to applications for roadworks throughout the county*, which mainly refers to roadworks and can only be used in part to the development in consideration'.

**British Standards (BS)**

***British Standard 7385:1993***

11.8 BS 7385 Evaluation and Measurement of Vibration in Buildings, establishes basic principles for carrying out vibration measurements used for assessing the vibration effects on buildings. The standard also presents guidance values or limits for vibration that is likely to cause cosmetic damage to buildings.

***British Standard 4142:1997***

11.9 BS 4142:1997 Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas, is used for assessing the noise impact at noise sensitive receptors of industrial sources such as mechanical plant and equipment. The Standard compares the *'rating level'* of the introduced noise with the existing *'background level'*. The significance of the difference between the two levels provides an indication of the likely community response.

***British Standard 8233:2014***

11.10 BS 8233:2014 Sound Insulation and Noise Reduction for Buildings – Code of Practice, provides guidance for the control of noise in and around buildings. The standard provides internal noise level criteria for various rooms with differing noise sensitivities and privacy requirements. These criteria are applicable to steady state noise sources such as mechanical equipment.

***British Standard 6472-1:2008***

11.11 BS 6472-1:2008 Guide to the Evaluation of human Exposure to Vibration in Buildings, provides guidance on the prediction of the human response to vibration in buildings. It also provides recommended frequency weighted vibration spectra and Vibration Dose Values (VDV) for which adverse comments are likely to occur in residential buildings.

***British Standard 5228:2009***

11.12 BS 5228 Noise and Vibration Control on Construction and Open Sites, provides a guide for noise and vibration control through way of 'best practice'. The standard includes sound power and vibration levels of typical construction equipment and methods to assess the impact of construction noise and vibration.

**Other standards**

***World Health Organisation (WHO) Community Noise Guidelines 1999***

11.13 WHO's Guidelines for Community Noise, presents acceptable values for community noise in specific environments using scientific knowledge on the health impacts of community noise.

***Design Manual for Roads and Bridges (DMRB)***

11.14 DRMB sets out methods for assessing the traffic noise level and details the magnitude of impact with respect to noise change.

## BASELINE STUDIES

**Noise and vibration survey**

11.15 Pre-development baseline conditions for noise will be established by means of environmental noise and vibration survey. The survey will be conducted over a period sufficient to indicate the local ambient noise climate over the intended time of operation

of the development. The survey will include unattended logging and attended short period samples.

11.16 The locations used for measurement will be representative of the identified noise sensitive receptors. Accepted methods for carrying out a survey are detailed in the following documents:

- British Standard 7445-1:2003 Description and measurement of environmental noise. Guide to quantities and procedures'.
- British Standard 4142 Method for Rating Industrial Noise Affecting mixed Residential and Industrial Areas
- British Standard 6472 Guide to Evaluation of Human Exposure to Vibration in Building. Vibration sources other than blasting.

11.17 Procedures for measurement of road traffic noise will comply with the guidance in 'Calculation of Road Traffic Noise', using the 'short form' procedure where appropriate. Procedures for measurement of railway noise will comply with the guidance in 'Calculation of Railway Noise'.

11.18 Pre-development baseline conditions for vibration will be established by means of an environmental vibration survey. This will focus on road and rail sources of vibration.

**Identification of noise sensitive locations**

11.19 Noise sensitive locations (NSLs) will be identified after on site visit scheduled for November/December 2014. These will be confirmed with the planning authorities concerned. Our consultation process will start as soon as the name of the person responsible for the noise control on the authority side will be communicated.

11.20 The site is adjacent to residential areas to his South and West boundary and to mixed commercial/residential to his east boundary. The north boundary is identified by the River Thames (see figure 1.1 – 1.6).

11.21 It is recommended that noisy elements during the construction and operational phase of the development are located away from the residential receptors to the South and West as far as practicable, and/or be acoustically treated as necessary. Elements of the development that will produce noise and vibration issue will be identified when the preliminary design will be finalized.

11.22 The Proposed Development will also have the potential to increase levels of road traffic on surrounding roads. Details of the formal road traffic noise impact study will be provided by a third party consultant.

11.23 Further baseline data will be gathered from the following sources:

- Dartford's noise assessment reports and monitoring data;
- Gravesham's noise assessment reports and monitoring data;
- consultation with environmental health officers.

## OUTLINE ASSESSMENT METHODOLOGY

11.24 This section presents the methodologies used to assess potential noise and vibration impacts during the construction and operational phases of the development. Methods are based on relevant planning policies and standards detailed above.

11.25 A description of the significance criteria is presented in this section.

### Construction noise and vibration

#### *Construction noise prediction methodology*

11.26 Construction noise predictions can be calculated using the methodology outlined in BS 5228-1. The noise levels generated by construction activities is predicated on the following variables:

- sound power level (Lw) of the plant and equipment used on site;
- period of time at which the on-site plant and equipment is operating (known as the on time);
- the distance between the construction site and noise sensitive locations;
- attenuation due to barrier effects and ground absorption.

11.27 In order to assess the noise generated by construction activities, it is necessary to have information on the type and number of plant and equipment, a programme of works, percentage on times and the location of the activities.

***Construction noise significance***

11.28 The criteria for the significance of construction noise upon Noise Sensitive Receivers (NSRs) is derived from Annex E of BS 5228-1. This criterion is based on the total construction noise level which is a combination of the pre-existing ambient noise level plus construction noise.

11.29 The significance of construction noise can be determined using the ABC method which sets an appropriate assessment category which is derived from the pre-existing ambient noise level. If the total construction noise level exceeds the assessment category value, then a significant effect is deemed to occur.

**Table 11.1: threshold of significant effect at dwellings. This shows the evaluation day time periods and the assessment thresholds over the 3 categories, measured in Decibels (dB) It is common practice to measure noise levels using the A-weighting setting, in which case the term LAeq is used, which describes the equivalent continuous sound level.**

| Evaluation Period | Assessment Category (dB LAeq) | | |
|---|---|---|---|
| | A* | B* | C* |
| Night-time (23:00-07:00) | 45 | 50 | 55 |
| Evening and Weekends** | 55 | 60 | 65 |
| Daytime (07:00-19:00) | 65 | 70 | 75 |

**Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than these values.*
*Category B: threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are the same as Category A values.*
*Category C: threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are higher than Category A values.*
*The Category (A, B or C) is to be determined separately for each time period and the lowest noise category is then used throughout the 24-hour cycle, e.g. a site which is category A by day and category B or C in the evening and night will be treated as category A for day, evening and night.*

*** 19:00-23:00 weekdays, 13:00 - 23:00 Saturdays and 07:00 - 23:00 Sundays.*

11.30 The noise significance can be summarised as shown in the Table below:

**Table 11.2: construction noise significance**

| Total Construction Noise Level | Magnitude of Impact |
|---|---|
| < Assessment Category | No Change |
| 1 to 3 dB > Assessment Category | Negligible |
| 3 to 5 dB > Assessment Category | Minor |
| 5 to 10 dB > Assessment Category | Moderate |
| +10 dB > Assessment Category | Major |

### *Construction traffic noise prediction methodology*

11.31 On-site construction activity generally increases existing traffic flow rates in the short term. Examples include truck deliveries and contractor vehicle movements. A short-term increase in road traffic noise of 1 dB is the lowest level that is considered to be just perceptible by most people. A description of classifying the magnitude of impacts for short-term traffic noise is presented in the table below.

**Table 11.3: magnitude of short-term noise impacts from traffic noise.**

| LA10, 18 h noise change from existing traffic levels | Magnitude of impact |
|---|---|
| 0 | No Change |
| 0.1 – 0.9 | Negligible |
| 1 – 2.9 | Minor |
| 3 – 4.9 | Moderate |
| 5 + | Major |

### *Ground-borne vibration prediction methodology*

11.32 Prediction of ground-borne vibrations are based on the methodologies set out in BS 5228-2. The standard provides Peak Particle Velocity (PPV) levels based on different soil conditions for typical plant and equipment used for construction. BS 5228-2 also provides empirical prediction formulas which are based on known ground conditions and measured data.

11.33 There are few construction activities that may give rise to having the potential to cause a major impact. However some activities including demolition, excavation and piling have the potential to cause a major impact.

11.34 Vibration is assessed for effects on humans and cosmetic damage for buildings.

### *Vibration effects on humans*

11.35 Guidance on the human response to vibration is presented in Annex B, Table B.1 of BS 5228-2. These levels have been reproduced in the table below along with the significance of impact.

**Table 11.4: guidance on effects of vibration levels on humans**

| Vibration Level (PPV) | Effect | Magnitude of Impact |
|---|---|---|
| 0.14 mm·s-1 | Vibration might be just perceptible in the most sensitive situation for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration. | Negligible |
| 0.3 mm·s-1 | Vibration might be just perceptible in residential environments. | Minor |
| 1.0 mm·s-1 | It is likely that vibration of this level in residential environments will cause complaint, but can be tolerated if prior warning and explanation has been given to residents. | Moderate |
| 10.0 mm·s-1 | Vibration is likely to be tolerable for any more than a very brief exposure level. | Major |

### *Vibration effects on buildings*

11.36 Guidance on vibration effects on buildings can be found in Annexure B, Table B.2 of BS 5228-2. These levels have been reproduced in the table below.

**Table 11.5: Transient vibration guide values for cosmetic damage**

| Line | Type of Building | Peak Component Particle Velocity in Frequency Range of Predominant Pulse | |
|---|---|---|---|
| | | 4 Hz to 15 Hz | 15 Hz and above |
| 1 | Reinforced or framed structures. Industrial and heavy commercial buildings | 50 mm/s at 4 Hz and above | 50 mm/s at 4 Hz and above |
| 2 | Unreinforced or light framed structure Residential or light commercial buildings | 15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz | 20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above |

*NOTE 1 Values referred to are at the base of the building.*
*NOTE 2 For line 2, at frequencies below 4 Hz, a maximum displacement of 0.6 mm (zero to peak) is not to be exceeded.*

**Operational environmental noise impact**

***Mechanical plant and equipment prediction method***

11.37 BS 4142 is used to assess the noise impact of industrial noise sources such as fixed plant and equipment. The Standard compares the 'rating level' of the new fixed plant noise with the existing 'background level'. The difference between the two determines the likelihood of complaints.

**Table 11.6: BS 4142 likelihood of complaints**

| Difference between Rating Level and Background Level | Likelihood of Complaints |
|---|---|
| - 10 dBA or less | Positive indication that complaints are unlikely |
| +5 dBA | Marginal significance |
| +10 dBA or more | Indicates complaints are likely |

11.38 BS 4142 is used also to assess the noise impact of the park attractions and for the PA and amplified music.

***Traffic noise prediction methodology***

11.39 Traffic flows on surrounding roads typically increase when a development is introduced to the area. This leads to an increase in the traffic noise level over the long term and my potentially have an impact on nearby noise sensitive locations.

11.40 A long-term increase of 3 dB is considered perceptible by most people. The magnitude of impacts for long-term traffic noise is presented in the table below.

**Table 11.7: magnitude of long-term noise impacts from traffic noise**

| LA10, 18 h Noise Change from Existing Traffic Levels | Magnitude of Impact |
|---|---|
| 0 | No Change |
| 0.1 – 2.9 | Negligible |
| 3 – 4.9 | Minor |
| 5 – 9.9 | Moderate |
| 10 + | Major |

### *Summary of prediction methodologies and significance criteria*

11.41 A summary of the methodologies are presented in the Table below.

**Table 11.8: prediction methodologies and significance criteria**

| Potential Source of Noise and Vibration | Prediction Method |
|---|---|
| Construction Noise and Vibration | BS 5228, BS 6472, CRTN, DMRB |
| Operational Noise Impact | GD 03, BS 4142 and DMRB |
| Internal Noise and Sound Insulation Requirements | GD 03, BS 8233 and WHO |

## IDENTIFICATION AND EVALUATION OF SIGNIFICANT IMPACTS

### Construction

#### *Construction noise*

11.42 Guidance to construction noise and vibration is contained within BS 5228, although it does not provide any objective noise limits associated with construction activities.

11.43 Construction noise is temporary and for relatively short periods of time. Further assessment can be undertaken when more detailed construction information becomes available. Mitigation measures can also be incorporated to ensure the noise impacts are reduced.

#### *Traffic noise generated by construction*

11.44 Construction sites typically generate an increase in traffic flows around the area. A 3 dB increase from baseline traffic noise levels is experienced when traffic flows are doubled. This equates to a moderate impact.

11.45 Future traffic counts during the construction phase of the development have yet to be identified. Further assessment can be undertaken when detailed traffic flow rates are available

#### *Ground-borne construction vibration*

11.46 Ground-borne vibration from construction activities is assessed for human response and effects on nearby buildings.

11.47 Vibration levels of typical plant and equipment can be extrapolated from BS 5228-2 and CALTRAN Standard Plans 2004. Using empirical prediction formulas contained in BS 5228-2, the vibration level can be predicted at the nearest affected vibration sensitive receptor.

11.48 Construction vibration is temporary and for short periods of time. Further assessment can be undertaken when more detailed construction information becomes available. Mitigation measures can also be incorporated to ensure the vibration impacts are reduced. These measures are detailed later in this chapter.

**Operation**

***Noise from fixed plant and equipment***

11.49 BS 4142:1997 'Method for Rating Industrial Noise Affecting Mixed Residential and Industrial Areas' is widely used for assessing the impact of noise from mechanical services plant. The assessment parameter is the 'rating level' LR of the plant noise assessed at the position of residential properties compared with the 'background' level LA90.

11.50 In accordance with BS 4142, the requirement of 5 dB below the background noise ranges between a positive indication that complaints are unlikely or be of marginal significance.

11.51 Noise generated by fixed plant and equipment can be mitigated to levels that are unlikely to cause any complaints. Examples of mitigations measures are presented in Mitigation Measures.

11.52 When the design and selection of mechanical plant and equipment progresses, a noise assessment can be conducted to accurately predict the noise level at the nearest noise sensitive location.

***Traffic noise generated by development operation***

11.53 Traffic flows on roads adjacent to the development are expected the increase during operation. This will invariably lead to a rise in traffic noise levels at nearby sensitive locations.

11.54 In the absence of information regarding future operational traffic counts, we can assume that an increase of up to 50 percent in traffic flow volumes is expected during the operation of the development.

### *Noise impact on the development*

11.55 Noise intrusion into the development will be assessed in accordance with local authority and client requirements given the particular use of the development. The assessment will be based on architectural drawings and the external noise levels measured on site when this will become available.

11.56 Internal noise within the development will be assessed to ensure that the structure of the building will be sufficient enough to adequately contain any noise generated within the development.

11.57 The development will generate a lot of traffic by car and by river transport, an assessment will be provided when the transport study will be available.

11.58 Internal partitions such as separating walls, floors and doors will also be assessed to ensure noise activities within rooms do not disturb adjacent rooms.

## POTENTIAL MITIGATION MEASURES AND RESIDUAL EFFECTS

### Construction

### *Construction noise*

11.59 Mitigation measures to reduce the impact of construction noise are presented in Section 8 of BS 5228-1. These measures include:

- selecting quieter plant and equipment;
- turning equipment off when they are not in use;
- providing enclosures around fixed plant like power generators or using mains power;
- ensuring that all plant and equipment is well maintained; and
- avoiding unnecessary revving of engines.

11.60 Kent County Council (KCC) Memorandum allows for construction work to take place during the following hours:

- Monday to Friday: 7:00 am – 7:00 pm.
- Saturday: 8:00 am – 1:00 pm.
- Sunday / Bank Holiday: No Work.

11.61 Prior consent is required if any works are to be carried outside these hours. Contractors should contact the council for approval before commencement of works. The workforce may arrive on site 30 minutes prior but no working outside these times, unless changed by prior agreement. Noise to be kept to a minimum in the first hour.

***Construction vibration***

11.62 Mitigation measures to reduce the impact of construction vibration are presented in Section 8 of BS 5228-2. These measures include:

- Vibration isolation of stationary plant,
- Selecting less intrusive methods of piling, and
- Pre-auguring before installing the piles.

**Fixed mechanical plant and equipment**

11.63 Noise from fixed mechanical plant and equipment can be mitigated through good mechanical design, selection of quieter equipment and installation of acoustic silencers and louvres.

**Residual effects**

11.64 The prediction of construction noise and vibration levels will be based on assumptions that are worse case. All assessment will be performed when more info on the traffic generated by the development and the layout of the park will be available.

## REFERENCES

11.65 The references cited in this chapter are:

National Planning Policy Framework, March 2012

Kent County Council (KCC) Memorandum of understanding between listed pollution control (noise) local authority services within Kent and Kent County Council Highway services in relation to applications for roadworks throughout the county

Control of Pollution Act 1974 (CoPA)

British Standard 7385 Evaluation and Measurement of Vibration in Buildings

British Standard 4142:1997 Method for Rating Industrial Noise Affecting mixed Residential and Industrial Areas

British Standard 8233:2014 Sound Insulation and Noise Reduction for Buildings – Code of Practice

British Standard 6472-1:2008 Guide to the Evaluation of human Exposure to Vibration in Buildings

British Standard 5228 Noise and Vibration Control on Construction and Open Sites

WHO's Guidelines for Community Noise

Design Manual for Roads and Bridges (DMRB)

CALTRAN Standard Plans 2004

British Standard BS7445: Part 2: 1991: (ISO 1996-2: 1987) 'Description and Measurement of Environmental Noise – Acquisition of data pertinent to land use' (BSI, 1991)

# Twelve ◆ Cultural heritage

## RELEVANT LAW, POLICY AND BEST PRACTICE GUIDANCE

12.1 The following relevant law, policy and best practice guidance will be considered by the assessment:

### National legislation

12.2 There is a significant body of statute law dealing with the historic environment (primary legislation). Heritage assets that are deemed to be of particular importance are given legal protection through the following national legislation:

- The Ancient Monument and Archaeological Areas Act 1979
- The Planning (Listed Building and Conservation Areas) Act 1990
- The Hedgerows Regulations 1997 (as amended 2002).

### Planning policy

#### *National planning policy framework*

12.3 The principal national guidance on the importance, management and safeguarding of the historic environment resource within the planning process is National Planning Policy Framework (NPPF) Section 12: Conserving and Enhancing the Historic Environment. To summarise, government guidance provides a framework which:

- recognises that heritage assets are an irreplaceable resource;
- requires applicants to provide proportionate information on the significance of heritage assets affected by the proposals and an impact assessment of the proposed development on that significance;
- takes into account the desirability of sustaining and enhancing the significance of heritage assets and their setting;
- places weight on the conservation of designated heritage assets;
- requires developers to record and advance understanding of the significance of any

heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and impact, and to make this evidence (and any archive generated) publicly accessible.

***Local planning policy***

12.4 The Site falls partly within two local planning authority areas within North Kent: Dartford Borough and Gravesham Borough. In addition, the wider area includes land that falls in Thurrock Borough within South Essex. The following local planning policy documents are applicable to the study area:

- Dartford Local Plan Core Strategy, Adopted September 2011
- Dartford Local Plan 1995 : Saved Policies Following Adoption of the Core Strategy, September 2011 (which will be replaced by the Development Management DPD Policies)
- Gravesham Local Plan Core Strategy, Proposed Submission December 2012 (not yet adopted)
- Thurrock Core Strategy and Policies for Management of Development DPD, Adopted December 2011.

12.5 A review of the above documents has identified the following planning policies of relevance to the assessment of cultural heritage and archaeology:

- Policy CS4 – Ebbsfleet to Stone Priority Area (Dartford Core Strategy)
- Policy CS5 – Ebbsfleet Valley Strategic Site (Dartford Core Strategy)
- Policy CS6 – Thames Waterfront (Dartford Core Strategy)
- Policy CS03 – Northfleet Embankment and Swanscombe Peninsula East Opportunity Area (Gravesham Core Strategy)
- Policy CS06 – Ebbsfleet (Gravesham) Opportunity Area (Gravesham Core Strategy)
- Policy CS20 – Heritage and the Historic Environment (Gravesham Core Strategy)
- Policy B11 – Sites of Archaeological Importance (Dartford Local Plan 1995 Saved Policies)
- Policy B12 – Sites of Archaeological Importance (Dartford Local Plan 1995 Saved

Policies)

- Policy CSTP24 – Heritage Assets and the Historic Environment (Thurrock Core Strategy and Policies for Management of Development DPD)

- Policy PMD4 – Historic Environment (Thurrock Core Strategy and Policies for Management of Development DPD)

**Best practice guidance**

12.6 For the purpose of an Environmental Impact Assessment the following guidance will be followed:

- Standard and guidance for historic environment desk-based assessment (Institute for Archaeologists 2012)

- Design Manual for Roads and Bridges (DMRB), Vol. 11 Section 3 Part 2: HA 208/07 Cultural Heritage (Highways Agency 2007)

- Conservation Principles Policies and Guidance for the Sustainable Management of the Historic Environment (English Heritage 2008)

- National Heritage Protection Plan 2011

- The Setting of Heritage Assets (English Heritage 2011a)

- Seeing History in the View (English Heritage 2011b).

## RELEVANT DESIGNATIONS

12.7 Within the site boundary there are four Scheduled Monuments (see figure 5.2). These comprise:

- Palaeolithic sites near Baker's Hole, National Heritage List for England (NHLE) No. 1003557: The Scheduled Monument consists of two areas. One area was subject to partial excavation in 1970-1 and revealed rich deposits of fauna and bone and flint artefacts (dated to c. 250,000-150,000 Before Present (BP)), and also evidence for a skin tannery. The second area was excavated in the 1930s and 1969-70. This Scheduled Monument is also included on the Heritage At Risk Register.

- Neolithic sites near Ebbsfleet, NHLE No. 1004206: The Scheduled Monument consists of two areas, the first is the type-site of the Ebbsfleet Neolithic culture while

the second yielded worked flints of Late Upper Palaeolithic, Mesolithic and Neolithic date.

- Springhead Roman site, NHLE No. 1005140: The full extent of the Roman settlement of *Vagniacae* is not known, and the Scheduled areas, which is largely located outside of the site, is designed to protect the outer edges of the settlement.

- Medieval Woodland Boundary at Darenth Wood, NHLE No. 1013378: This monument survives as an irregularly-shaped, sinuous earthwork which encloses a wood which was managed during the medieval period.

12.8 There are no Listed Buildings, Conservation Areas, World Heritage Sites, Registered Parks and Gardens or Historic Battlefields located within the Site.

12.9 The site is located directly adjacent to a Grade II* Listed Building, Church of All Saints, with a further 32 Listed Buildings located within a 1km radius of the site.

12.10 A Site of Special Scientific Interest, Baker's Hole SSSI, is located within the site. It is a 6.5ha key Pleistocene site exposing various periglacial and temperate climate deposits and containing archaeological evidence of Palaeolithic activity.

## BASELINE STUDIES

12.11 This scoping study is based on a review of online historic environment data, together with a review of previous investigations carried out within and surrounding the site by Wessex Archaeology (Wessex Archaeology 1993; 1997; 2002; 2003a-c; 2004a-b; 2005a-c).

12.12 The baseline cultural heritage resource that could be potentially affected by the Scheme includes upstanding monuments and buried remains of all periods, designated and undesignated, within the Study Area extending 500m from the site (figure 12.1).

### Prehistoric

12.13 The Ebbsfleet Valley and its environs has been a key area for Palaeolithic research for over a hundred years. The Ebbsfleet valley is well known for its wealth of archaeological remains, primarily of Palaeolithic, Neolithic and Roman date. Many of the Palaeolithic discoveries had resulted from quarrying, primarily for chalk, undertaken since the late 19$^{th}$ century, while further extensive remains of varying dates were identified during archaeological works in advance of the construction of the Channel Tunnel Rail Link (CTRL), also known as High Speed 1 (HS1).

12.14 Palaeolithic remains within the site include the nationally important Middle Palaeolithic Levalloisian site of Baker's Hole (NHLE No. 1003557). Two areas of Baker's Hole, within

the proposed development site, are Scheduled Monuments, and the surrounding quarried area is designated as a geological SSSI. This monument is unusual in being one of very few non-cave Scheduled Palaeolithic sites. The site contains important undisturbed evidence of early Neanderthal presence in Britain, in horizons that also contain a rich diversity of large mammal bones. These deposits are extremely important and shed light on early human occupation of the area between 250,000 and 200,000 years ago. Other Palaeolithic remains identified within the proposed development include a rage of flint implements and a potential Upper Palaeolithic skull.

12.15 Work carried out in advance of the CTRL project showed that archaeological sites are preserved below alluvial and colluvial deposits, thus indicating that the whole of the Ebbsfleet Valley floodplain has a high potential for evidence of Mesolithic and Neolithic activity and for the contemporary environment of the lower Thames Valley. The valley is also well known as the location of the type-site of a form of Later Neolithic decorated pottery (Ebbsfleet Ware), with a Scheduled Neolithic site also located within the site (Neolithic sites near Ebbsfleet, NHLE No. 1004206). The remains of a potential Neolithic skeleton ('Galley Hill Man') were recovered within the site in the late 19$^{th}$ century during gravel extraction.

12.16 Bronze Age remains have also been identified within the site and the surrounding area. Within the site a Bronze Age socketed axe was recovered, as well as the remains of a potential Bronze Age wooden trackway along the foreshore of the River Thames. Evidence for burnt mounds, ring ditches, scatters of worked and burnt flint, a potential fish trap and Bronze Age pits have also been found in the surrounding area.

12.17 Iron Age sites recorded in the area include the site of religious/ritual activity which included a processional way running for 450m from the edge of the river to Ebbsfleet springs, as well as a rectangular enclosure.

**Romano-British**

12.18 Romano-British remains are represented by the Scheduled remains of the settlement of *Vagniacae* (NHLE No. 1005140), which is thought to have supported a population of up to 2000 at its height. The southern edge of the site is located within the northern limit of the Scheduled Monument. A Romano-British ritual pit has also been recorded within the site. Other Romano-British remains in the wider area include a religious site and evidence for a timber waterfront.

**Saxon to Modern**

12.19 A 7$^{th}$-8$^{th}$ century mill was recorded in the wider area, along with a number of sunken featured buildings, potentially dating to the Saxon period. A late 7th century Saxon cemetery has also been recorded at the edge of the Ebbsfleet Valley at Springhead, to the south of the site.

12.20 The medieval and post-medieval periods were dominated by agricultural activity. A major transformation in the Valley occurred in the late 19th-early 20th century when chalk quarrying was undertaken on a large scale (as well as small scale gravel and clay extraction). 19th century industrial development is represented by the cement works which produced 'Roman' cement at Northfleet in the early 19th century. The industry grew substantially when Portland cement was produced from 1843, after being patented by Joseph Aspidin in 1824. A surviving mid 19th century bottle kiln (Aspidin's Kiln) at the works is a Scheduled Monument (NHLE No. 1004227).

12.21 The site also contains the sites of a number of World War II remains, including bomb shelters and air raid sirens.

## CONSULTATION UNDERTAKEN TO DATE

12.22 An EIA Screening Request was carried out in October/November 2013. Responses which relate to archaeology and cultural heritage are summarised below and shown in full in Appendix 1.

### English Heritage

12.23 English Heritage's letter dated 5th November 2013 provided initial advice on the scope of the EIA. The letter detailed the archaeological importance of the site and surrounding area. The potential for as yet unidentified archaeological remains to be encountered within the site was stated, as were the potential impacts on Scheduled Monuments within the proposed development site, and on Listed Buildings and Conservation Areas in the surrounding landscape. The letter also stated that given results from previous large-scale developments in the area, it is likely that significant archaeological remains will be encountered within the site and that should it not be possible to preserve these remains in situ, then their investigation and study would require a major programme of work.

12.24 The Scheduled Monuments, Listed buildings and Conservation Areas specifically mentioned were:

- Palaeolithic Sites near Baker's Hole, Scheduled Monument
- Neolithic sites at Ebbsfleet, Scheduled Monument
- Springhead Roman Site, Scheduled Monument
- The grade II listed lighthouse and war memorial structures located within the former Dartford cement works

- The grade II listed Factory Club building
- The grade I listed parish church and other listed buildings that represent the core of the historic settlement at Northfleet (also a Conservation Area)
- The grade II* listed church at Swanscombe
- The listed house on Knockhall Road
- The two listed structures associated with the historic landscape at Ingress Park

**Kent County Council**

12.25 Kent County Council's letter dated 7th November 2013 provided initial advice on the scope of the EIA. The Heritage Team highlighted the Scheduled Monuments within the site, as well as nationally important archaeological remains of Palaeolithic and Neolithic date which are currently undesignated. Reference is also made to extensive archaeological remains of all periods which are of at least regional significance, together with Listed Buildings within the wider area which may be affected through impacts on their setting. These buildings include:

- Church of All Saints, Galley Hill
- SS Peter and Paul, Swanscombe
- Ingress Abbey

**Further proposed consultation**

12.26 Consultation with the Heritage Team at Kent County Council is proposed to discuss and agree further requirements for fieldwork to inform the assessment.

12.27 Consultation during the EIA process will also be carried out with English Heritage and Natural England.

## OUTLINE ASSESSMENT METHODOLOGY

**General approach**

12.28 The cultural heritage resource comprises all aspects of the historic environment, including:

- Archaeological remains – above and below ground, including palaeoenvironmental remains

- Historic buildings – including historic structures, Listed Buildings and Conservation Areas

- The Historic Landscape – the character of the historic landscape, including field patterns. Boundaries and extant historic elements of the landscape

12.29 English Heritage's Conservation Principles, Policies and Guidance (2008) provide a comprehensive framework for the sustainable management of the historic environment; inter alia (paragraphs 161 and 162):

- Balanced and justifiable decisions about change in the historic environment depend upon understanding who values a place and why they do so, leading to a clear statement of its significance and, with it, the ability to understand the impact of the proposed change on that significance.

- Every reasonable effort should be made to eliminate or minimise adverse impacts on significant places. Ultimately, however, it may be necessary to balance the public benefit of the proposed change against the harm to the place. If so, the weight given to heritage values should be proportionate to the significance of the place and the impact of the change upon it.

12.30 There is no single accepted or standard guidance for the assessment of the likely effects of development on the archaeological and cultural heritage resource. Although developed for use on trunk road schemes, the Design Manual for Roads and Bridges (DMRB Vol. 11, Section 3 Part 2, HA 208/07) sets out a detailed methodology for considering the historic environment, which to date represents the most comprehensive published guidance. It is proposed to apply the approach set out in the current DMRB 11.3.2 to the assessment of the effects of the Scheme on archaeology and cultural heritage. The methodology and criteria defined in DMRB 11.3.2 will be modified as appropriate to reflect the nature, scale and context of the Scheme, taking account of English Heritage's Conservation Principles (above).

12.31 Effects arising from both the construction and operation phases will be assessed. For impacts on archaeology and cultural heritage, the construction phase is taken to include the permanent effects of development, as well as the temporary effects of construction activities, taking into account proposed mitigation measures. The operation phase is taken to include the effects of use of the Scheme taking into account proposed mitigation. The cumulative effects of the Scheme on archaeology and the historic environment will also be considered.

**Identification of baseline conditions**

12.32 An historic environment desk-based assessment (DBA) will be carried out and used as a baseline resource for the completion of the Environmental Statement chapter. The general approach to the DBA will follow industry best practice as set out in 'Standard and guidance for historic environment desk-based assessments' (IfA 2012).

12.33 For the purposes of the assessment a 500m Study Area will be defined surrounding the Site (figure 12.1). The archaeological, built heritage and historic landscape within the Study Area will be assessed. Baseline conditions for archaeology and cultural heritage will be established through desk-based review of existing sources of information, supported where appropriate by the use of field survey. Effects on the settings of designated heritage assets will be assessed within a wider 5km Study Area (figure 12.1).

12.34 A number of publically accessible sources of primary and synthesised information will be consulted, including:

- The Kent Historic Environment Record;
- National heritage datasets including the National Heritage List for England (NHLE), Images of England, PastScape, Viewfinder, NMR Excavation Index, and Parks and Gardens UK;
- Historic manuscripts, surveyed maps, and Ordnance Survey maps held at the Kent History and Library Centre; and
- Relevant primary and secondary sources held at the Kent History and Library Centre and in Wessex Archaeology's own library. Both published and unpublished archaeological reports relating to excavations and observations in the area around the Site were studied.

12.35 A review of all previous archaeological investigations within the site and study area will be undertaken and an assessment of the level of previous disturbance at the site and the potential for further archaeological remains to be uncovered will be presented.

12.36 In order to fully understand the existing baseline resource at the site, field evaluations may be required prior to submission of the Environmental Impact Assessment. Subject to access, consultations and approvals, these evaluations may include, but are not limited to, some or all of the following techniques:

- Should areas where no previous disturbance has occurred be identified in the DBA, a geophysical survey may be required

- Monitoring of geotechnical work across the site, and the creation of a detailed deposit model using this and all other available existing data (e.g. BGS logs, previous SI works)

- Archaeological trial trenching and/or test pitting to confirm the results of previous stages of survey and/or to detect archaeological sites represented by buried archaeological remains, which could be directly affected by the Scheme

## ASSESSMENT SIGNIFICANCE CRITERIA

12.37 The significance of the effects of the Scheme on baseline conditions will be assessed through a process combining an evaluation of the importance of the cultural heritage resource and the scale of the impact (magnitude of change) that would arise due to the construction and operation of the Scheme, taking in to account mitigation measures incorporated into the design or delivered during the construction and operation stages.

12.38 The methodology for defining the significance of cultural heritage effects set out in DMRB 11.3.2 applies a three step process as follows:

- Evaluation of Resource

- Assessment of Magnitude of Impact

- Determination of Significance of Effects

### Evaluation of the resource

12.39 The sensitivity of cultural heritage assets is considered in relation to statutory designations, and priorities or recommendations set out in national research agendas. Professional judgement is used to determine the sensitivity of the resource and the following table is used as a guide.

**Table 12.1: Sensitivity of archaeological and cultural heritage receptors**

| **Sensitivity** | **Criteria** | | |
|---|---|---|---|
| | **Archaeology** | **Built Heritage** | **Historic Landscape** |
| Very High | World Heritage Sites inscribed for their archaeological or built heritage qualities. Sites of international | Standing remains inscribed as of universal importance as World Heritage Sites. Other buildings of recognised | World Heritage Sites inscribed for their historic landscape qualities. Historic landscape of |

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| | importance. | international importance. | international importance. |
| High | Scheduled Monuments or monuments in the process of being Scheduled. Undesignated sites and monuments of schedulable quality and importance. Previously unknown sites of schedulable quality and importance, discovered in the course of evaluation or mitigation (i.e. sites of demonstrable national importance). | Grade I and II* Listed Buildings. Other Listed Buildings that can be shown to have exceptional qualities in their fabric or historical association not adequately reflected in the Listing. Registered Historic Parks and Gardens Grades I and II*. Conservation Areas containing Very Important buildings. | Designated historic landscapes of outstanding interest. Undesignated landscapes of outstanding interest. Undesignated landscapes of high quality and importance, and of demonstrable national importance. |
| Moderate | Local Authority designated heritage sites. Previously unknown and undesignated sites that would justify Local Authority designation (i.e. sites of regional importance). Sites with specific and substantial importance to the local community. | Grade II Listed Buildings, Registered Historic Parks and Gardens Grade II. Historic buildings that can be shown to have exceptional qualities or historical association. Conservation Areas. Historic townscapes or built-up areas with historic integrity in their buildings, or built setting. | Designated special historic landscapes. Undesignated historic landscapes that would justify special historic landscape designation. Landscapes of regional importance. Historic landscapes with specific and substantial importance to the wider community. |
| Low | Undesignated sites of local importance. Sites with specific and substantial importance to local interest groups, but with limited wider importance. Archaeological sites whose importance is limited by poor preservation and/or poor survival of contextual associates. Sites and features of limited value in themselves or whose | 'Locally Listed' Buildings. Historic (unlisted) buildings of modest quality in their fabric or historical association. Historic Townscape or built-up areas of limited historic integrity in their buildings, or built settings. | Undesignated historic landscapes of local importance. Historic landscape with specific and substantial importance to local interest groups, but with limited wider importance. Historic landscapes whose importance is limited by poor preservation and/or poor survival of contextual associations. Historic landscapes of limited value. Including those |

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| | importance is limited. These may include those for which detailed information is available in primary sources and where archaeological investigation would add no significant additional information. | | for which detailed information is available in primary sources and where further investigation would add no significant information. |
| Negligible | Sites/features that are so badly damaged that too little now remains to justify their inclusion in a higher grade. Sites with no surviving historic content. | Buildings that are so badly damaged that too little now remains to justify their inclusion in a higher grade. Sites with no surviving historic content. | Landscapes that are so badly damaged that too little now remains to justify their inclusion in a higher grade. Sites with no surviving historic content. |
| Unknown | The importance of the resource cannot be ascertained due to limited existing information; therefore the value of the resource is classified as ranging from High to Low sensitivity. | Buildings with some hidden (i.e. inaccessible) potential for historic significance. | The importance of the resource cannot be ascertained due to limited existing information, therefore the value of the resource is classified as ranging from High to Low sensitivity. |

### Assessment of magnitude of impact

12.40 The assessment of the magnitude of impact is the identification of the degree of the effect of the Scheme upon the cultural heritage resource. The magnitude of impact can be positive or negative and is ranked without regard to the sensitivity of the asset. The table below provides a guide for assessing the magnitude of impact in respect of the cultural heritage resource.

**Table 12.2: Assessment criteria for determining the magnitude of impact**

| **Magnitude** | | **Criteria** |
|---|---|---|
| Major | Adverse | Change to most or all key archaeological materials or historic building elements, such that the resource is totally altered.<br>Comprehensive changes to setting of archaeological or historic building assets.<br>Change to most or all key historic landscape elements, parcels or components; extreme visual effects; gross change of noise or change to |

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|---|---|---|
| | | sound quality; fundamental changes to use or access; resulting in total change to historic landscape character. |
| | Beneficial | Large scale or major improvement of the heritage asset; extensive restoration or enhancement; major improvement of attribute quality. |
| Moderate | Adverse | A fundamental change or appreciable difference to the existing environment. Changes to many key archaeological materials or key historic building elements, such that the resource is clearly modified. Considerable changes to setting that affect the character of the asset.<br>Changes to many key historic landscape elements, parcels or components; visual change to many key aspects of the historic landscape; noticeable differences in noise or sound quality; considerable changes to use or access; resulting in moderate changes to historic landscape character. |
| | Beneficial | Benefit to, or addition of, key characteristics, features, or elements or improvement of heritage asset. |
| Minor | Adverse | A minor change to the site or feature. Changes to the key archaeological materials or key historic building elements, such that the asset is slightly altered. Slight changes to setting.<br>Change to few key historic landscape elements, parcels or components; slight visual changes to few key aspects of historic landscape; limited changes to noise levels or sound quality; slight changes to use or access; resulting in limited changes to historic landscape character. |
| | Beneficial | Minor benefit to, or addition of key characteristics, features or elements; some beneficial impact on heritage asset or a reduction in the risk of a negative impact occurring. |
| Negligible | Adverse | Very minor changes to archaeological materials, building elements, or setting.<br>Very minor changes to key historic landscape elements, parcels or components; virtually unchanged visual effects; very slight changes in noise levels or sound quality; very slight changes to use or access; resulting in very small change to historic landscape character. |
| | Beneficial | Very minor benefit |
| No change | | No change would be perceptible either positive or negative. |

**Determination of significance of effect**

12.41 Significance is a product of the sensitivity of the resource and the magnitude of the effect upon it. The significance of the effects of construction and operation of the Scheme will be assessed separately; residual effects will be assessed taking in to account agreed mitigation measures. The overall effects of the Scheme on any part of the cultural heritage resource will be assessed as a combination of the impacts of construction and operation.

12.42 The table below illustrates how the sensitivity of the asset and the magnitude of the impact are combined to produce an assessment of the significance of effect.

**Table 12.3: System for assessing the significance of effect on heritage assets**

| | | Magnitude of impact | | | | |
|---|---|---|---|---|---|---|
| | | **No change** | **Negligible** | **Minor** | **Moderate** | **Major** |
| **Receptor sensitivity** | **Very high** | Neutral | Slight | Moderate | Large | Very large |
| | **High** | Neutral | Slight | Moderate | Large | Large |
| | **Medium** | Neutral | Slight | Slight | Moderate | Large |
| | **Low** | Neutral | Slight | Slight | Slight | Moderate |
| | **Negligible** | Neutral | Neutral | Neutral | Neutral | Neutral |

## POTENTIAL MITIGATION MEASURES AND RESIDUAL EFFECTS

12.43 Scheme assessment and design will be undertaken as an iterative process. Where ever possible, Scheme design would seek to mitigate and remove potential impacts on archaeological and cultural heritage features.

12.44 The following aspects of the Scheme are likely to have potential cultural heritage effects through ground disturbance and the construction of structures which may result in effects on the setting of heritage assets:

- The construction and operation of the core resort on Swanscombe Peninsula (including a range of events spaces, rides, studio attractions, cinemas, theatres, a water park, an open-air arena, night clubs, catering, retail and amenity facilities).
- The construction and operation of c.30,000m2 of event space for conferences and trade shows.
- The construction and operation of a range of hotels with a combined total of c. 5,000 bedrooms.
- The creation of a country park beside the River Thames.
- The construction and operation of c.14,000 car parking spaces, located partly in multi-storey facilities set within a former quarry, and bus and coach parking.
- The construction and operation a four-lane dual carriageway between the core area and the A2(T) / B259 junction.
- Flood prevention works.
- Landscape works throughout the development site, incorporating earth shaping, new planting and habitat creation.

- Provision of service infrastructure including water, electricity and gas supplies, telecommunications and arrangements for water and wastewater treatment and disposal on Swanscombe Peninsula.

- Removal of trees/scrub vegetation in association with site clearance and construction works throughout the development site.

- Removal of redundant buildings and other built structures in association with site clearance and demolition works.

- Lighting and nocturnal visual effects during construction works and operation.

12.45 Potential mitigation measures may include:

- The avoidance of direct impacts on archaeological remains through site selection and design

- The use where possible of land which has been previously disturbed

- The use where possible of existing infrastructure

- The structures should be designed to minimise any below ground impact

- Appropriate design and screening to reduce impacts to the setting of designated heritage assets

- Where direct impacts on archaeological remains (or on deposits with a high potential for significant archaeological remains, e.g. Pleistocene Terrace gravels) cannot be avoided, a programme of archaeological and geoarchaeological investigation prior to development would be designed in consultation with Kent County Council and English Heritage, in order to mitigate the loss of any remains through the recording, analysis and publication of the results.

## RESIDUAL EFFECTS

12.46 Further heritage assets will most likely be identified throughout the assessment process and the residual effects detailed below should be taken as outline only.

12.47 Following the appropriate implementation of mitigation strategies by design and during construction, the effect of the Scheme on the Cultural Heritage resource would be reduced.

- Should archaeological remains be preserved in situ, the residual effects could be Negligible Adverse.

- Should preservation by record be required this may result in a residual effect of Minor Adverse.

- Appropriate design and landscaping could potentially reduce effects on the setting of heritage assets to Minor Adverse.

## POTENTIAL EFFECTS ON EUROPEAN PROTECTED SITES

12.48 No European protected sites will be affected by the Scheme.

## POTENTIAL TRANSBOUNDARY EFFECTS

12.49 It is considered unlikely that the proposed development would have any potential significant transboundary cultural heritage effects.

## TOPICS SCOPED OUT OF FURTHER ASSESSMENT

12.50 At this stage, no topics are proposed to be scoped out of the assessment. However, this position may change in light of further baseline work and design development.

## CUMULATIVE AND IN-COMBINATION EFFECTS

12.51 The proposed development has the potential to have cumulative and/or in-combination cultural heritage effects with other major development proposals within the surrounding area. These include, but are not limited to:

- Ebbsfleet Garden City

- Crossrail

- Lower Thames Crossing

- London Gateway Port

12.52 An assessment of the potential cumulative cultural heritage effects of the proposed development in combination with the above proposals will be undertaken in accordance with guidance set out in DMRB. Other developments which may arise during the assessment process, and which may be considered to contribute to cumulative cultural heritage effects, will also be considered.

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# Thirteen ◆ Land use and socio-economic effects

## INTRODUCTION

13.1 This section explains the proposed approach to measuring the potential range of socio-economic effects that are likely to be generated by the construction and operation of the London Paramount Entertainment Resort.

13.2 The need for this assessment results from the potential of the Resort to generate significant net beneficial effects at site specific, local, regional and national economic levels given that anticipated tourism levels could support in the regional of 27,000 direct and indirect jobs.

13.3 Consequently the socio-economic assessment will measure the value of these effects across a range of standard indicators (in terms, for example, of employment, gross value added ('gva') and public exchequer savings) and relevant beneficiary groups.

13.4 Similarly the socio-economic assessment will also identify any potential negative socio-economic effects that might arise (during both construction and operation) and identify appropriate mitigation approaches to minimise such effects.

## RELEVANT LAW, POLICY AND BEST PRACTICE EVIDENCE

13.5 There is no relevant law or UK legislation that specifies the detailed context or procedures required to undertake a socio-economic impact assessment. Notwithstanding this there is a body of guidance and related benchmark materials and data measures which Government Departments have adopted in conducting such assessments.

13.6 Accordingly this assessment work will be conducted in accordance with the guidance in the HM Treasury 'Green Book' ("The Green Book: appraisal and evaluation in central government", April 2013) which sets out, for UK public sector bodies, how to appraise proposals before committing funds to a policy programme or project. The assessment will also draw on a range of best practice guidance and data sources including the Homes and Community Agency guidance regarding employment (2010), Scottish Enterprise (2008) guidance regarding additionality, the BERR (2009) RDA Evaluation reports Cabinet Office (2012) data sets and guidance in relation to social effects.

13.7 Data will also be employed from the tourism studies identified in table 13.1:

**Table 13.1: Existing tourism studies**

| Source | Document | Date |
|---|---|---|
| Visit Britain | 'Delivering a Golden Legacy - Growth strategy for inbound tourism to Britain 2012 – 2020' | H2 2012 |
| Visit Britain | 'Britain Marketing & 2012 Games Global Strategy 2010 – 2013' | Q1 2010 |
| Visit England | 'Corporate strategy 2011 – 2015' | 2011 |
| Visit England | 'Marketing plan 2011 – 2015' | 2011 |
| Visit England | 'England – A Strategic framework for Tourism 2010 – 2020' | Revised 2011 |
| London & Partners | '2014 – 2015 Business Plan Summary' | 2014 |
| London & Partners | 'Strategy' | 2012 |

13.8 The assessment will also take into account relevant documents prepared by stakeholders such as the Greater London Authority, Kent County Council, Dartford Borough Council and Gravesham Borough Council, including those listed in table 13.2:

**Table 13.2: Further source documents**

| Source | Document | Date |
|---|---|---|
| Greater London Authority | 'The Mayor's Economic Development Strategy for London' | May 2010 |
| Greater London Authority | 'Jobs and Growth Plan for London' | April 2013 |
| Greater London Authority | 'Homes for London – The London Housing Strategy' | April 2014 |
| Greater London Authority | 'Police and Crime Plan 2013 – 2016' | March 2013 |
| Greater London Authority | 'London Tourism Action Plan 2009-13' | 2009 |
| Greater London Authority | 'The London Plan - Spatial Development Strategy for Greater London' | October 2009 |

| | | |
|---|---|---|
| Kent County Council | '21st Century Kent - A Blueprint for the County's Future' | January 2010 |
| Kent County Council | '14-24 - Learning, Employment and Skills Strategy 2013 – 2016' | Q4 2013 |
| Kent County Council | 'Unlocking Kent's Cultural Potential - A Cultural Strategy for Kent 2010-2015' | 2010 |
| Kent County Council | 'Better Homes: localism, aspiration and choice – A Housing Strategy for Kent and Medway' | May 2011 |
| Kent County Council | 'Growing the Garden of England: A strategy for environment and economy in Kent' | July 2011 |
| Kent Police | 'Policing Kent 2012/15' | 2012 |
| Kent Forum | 'Vision for Kent 2012 – 2022' | 2012 |
| Gravesham Borough Council | 'Gravesham Local Plan - Core strategy' | September 2014 |
| Gravesham Borough Council | 'Housing strategy 2009 – 2013' | 2009 |
| Gravesham Borough Council | 'A Tourism Strategy for Gravesham' | September 2009 |
| Gravesham Borough Council | 'Economy and employment background paper' | December 2012 |
| Dartford Borough Council | 'Dartford Local Development Framework: Sustainability Appraisal / Strategic Environmental Assessment' | August 2010 |
| Dartford Borough Council | 'Housing strategy 2009 – 2012' | 2009 |
| Dartford & Gravesham Community Safety Partnership | 'Strategic Assessment 2013/14' | 2013 |
| Dartford & Gravesham Community Safety Partnership | 'Community Safety Plan 2014-15' | 2014 |

13.9 In the context of potential socio-economic effects relating to transport issues - we will draw upon data from various relevant sector studies including those identified in table 13.3.

**Table 13.3: Socio-economic effects of transport - source documents**

| **Source** | **Document** | **Date** |
|---|---|---|
| Department for Communities and Local Government | 'Ebbsfleet Development Corporation - Consultation paper' | August 2014 |
| HS2 Ltd | 'HS2 Regional Economic Impacts' | September 2013 |
| HS2 Ltd | 'High Speed Rail, Transport Investment and Economic impact' | 2013 |

## RELEVANT DESIGNATIONS

13.10 The site is located within an area long established as a priority for regeneration and zone of change within national and local planning policies. Consideration will be given at both site level (and more widely across agreed designations) of any socio-economic effects associated with the proposed resort development (including, for example, reduced rights of way (figure 13.1) on the site and health related effects associated with increased traffic movements) in terms of significance (as detailed below under the significance criteria section) and, where material, quantifiable levels of such effects.

## BASELINE STUDIES

13.11 To assess the potential socio economic effects of the Resort proposals it will be necessary to identify the relevant baseline conditions at appropriate spatial levels (which will be defined with appropriate public agencies). Establishing such conditions will be important in outlining the 'net effects' of the Resort (by assessing and comparing the effects of the current proposals to 'what would have happened anyway' or 'counterfactual position').

13.12 In establishing these conditions consideration will be given to the socio-economic effects over two distinct periods of time and related activities, namely the:

- Construction period – which is assumed to be over the period of January 2017 to December 2019; and,

- Subsequent operating period – over a 25 year period from opening in 2020.

13.13 In relation to construction, therefore, establishing the baseline conditions will be undertaken through desk research of local and regional data in relation to the construction and capital equipment sectors and any known plans for other local and regional capital projects over the construction period for the Resort.

13.14 In the case of the operating period analysis will focus on local and regional data with regard to relevant sectors that are comparable to the operations of the resort (where relevant and available) again in order to outline what is likely to occur in these sectors (in economic terms) in the absence of the Resorts operations. We will overlay this data with regional and national growth projections to assess the trajectory of the local economy without the Resort.

13.15 Consequently, over both time periods, consideration will be given to economic and community profiling by collecting and outlining relevant site, local, regional and national demographic, socio-economic, business and employment data by drawing on local plans, employment land reviews and a range of strategy and policy documents (including those identified in the tables above at 13.5, 13.6 and 13.7).

13.16 In broad terms, therefore, the analysis of baseline conditions will draw on extant data to provide a range of projections concerning what might happen to the local economy in the absence of the Resort and, consequently, provide a baseline against which to compare and contrast the effects of the Resort.

## CONSULTATIONS UNDERTAKEN TO DATE

### Public sector bodies

13.17 During June to October 2014, LRCH held:

- Meetings with officers from Gravesham Borough Council, Dartford Borough Council and Kent County Council
- A public exhibition preview session attended by Councillors from Gravesham Borough Council and Dartford Borough Council
- A meeting with Kent Police which was attended by the Chief Constable, Deputy Chief Constable and Director of Support Services.
- A meeting with Bean Parish Council
- A meeting with the Environment Agency

### Other organisations

13.18 Between June 2014 and October, LRCH met with:

- The Kent Development Group (Locate in Kent)
- Campaign to Protect Rural England (Kent)
- Gravesham Area Board
- Northfleet Harbour Trust
- Kent Construction Expo 2014

**Public consultation**

13.19 Between 10th and 12th July, Stage One of the public exhibitions were held.

13.20 In October 2014, LRCH presented at a North Kent B2B event.

13.21 The outcomes from all of these various consultations will be used to help inform the socio-economic analysis. In addition a key component of the future and wider EIA consultation programme will be to assess with stakeholders the relevant economic and social effects associated with construction and operation, the potential significance of such effects and the consequent measurement (and where relevant mitigation) where such effects may be material.

## OUTLINE METHODOLOGY

13.22 Based on the current Green Book guidance at minimum the measurement of the economic effects associated with the construction of the Resort will be based on the:

- Cost estimates associated with the Resort;
- Consultation with RLB and Greenway to assess the proportion of capital equipment that may require to be imported to the UK (and, therefore, discounted from the benefits associated with construction);
- A review – again with RLB and Greenway - of the planned expenditure profile (and consequent levels of on-site labour likely to be required); and,
- Baseline data provided from the relevant local authorities, in relation to local and regional labour supply, capital equipment providers and other known future capital programmes, to provide a baseline against which to estimate likely local content and displacement/non-additionally effects.

13.23 Based on the above the levels of likely direct employment associated with construction will be estimated by dividing total labour costs by average regional and UK construction wage levels. The resultant estimates will be 'sense checked' by comparing the outcomes to average labour to construction cost ratios for major UK capital projects (which typically fall within the region of one full-time employee per annum per £65,000 to £100,000 construction spend).

13.24 Average (regional and national) multiplier ratios will be applied to these direct on site employment ranges to assess the indirect and induced employment effects likely to be associated with the Resort construction.

13.25 Similarly consideration will be given to the gva associated with these employment levels using national average data for relevant sectors. Likely indirect and induced gva effects related to UK capital expenditure will also be considered using appropriate multiplier ratios to provide an indication of total gross gva.

13.26 Finally leakage, displacement and non-additionality proportions will be applied to the above (employment and gva effects) by using the local baseline data gathered and previous available evaluation evidence relating to major UK capital projects (including, for example, the BERR evaluation of Regional Development Agency expenditure). Using this data will generate a range of net effects (based on the assumption that the Resort will exhibit similar displacement and non-additionality effects to other (comparable) major capital expenditure projects in the UK).

13.27 To provide summary indicators of construction effects the resultant effects identified from the above will be subject to:

- A discount factor of 3.5% per annum to all monetary (GVA) values in line with Green Book guidance; and,

- Discounting of all construction employment estimates by 10 years in order to derive a full-time employment level that can be directly compared to operational employment levels.

13.28 In addition there are various further steps which may be undertaken in order to test and refine the estimates likely to be derived from this *"minimum"* approach. In particular, engaging, through a more detailed consultant process, with relevant representatives of local and regional authorities to explore:

- The extent to which the local and regional construction and capital equipment sectors can provide the quantity and quality of labour and capital resources against the employment and equipment levels identified;

- Approaches that the public sector might develop in order to maximise the levels of local labour and capital content;

- Displacement and non-additionality effects in the context of known other "baseline" projects and construction programmes;

- Potential "*on costs*" associated with delivery (e.g. road widening, temporary accommodation, skills training that might require public sector support, etc.); and,

- Consequent knock-on and long term costs and benefits associated with the Resorts construction.

13.29 Such engagement will allow more detailed consideration of the local and sub-regional effects of construction and how best to maximise these.

13.30 In addition it may be possible to engage with future potential first tier suppliers to examine their likely use of local labour and capital as well as commitment or otherwise to any: "*local or social value content clauses"*. This latter effect may be particularly important if a significant proportion of on-site (or off-site) local labour may be drawn from those currently unemployed as there may be resultant wider social benefits to returning people to work. In contrast various concerns have been expressed - through initial discussions with public agencies - of the potential negative effects of a large transit work force in the area in relation to such issues as theft, prostitution and gang labour.

13.31 It will also be necessary to assess the potential effects on the local housing market, in terms of the influx of people during the construction period and the pressures this could exert on the private rented housing sector.

13.32 It will be important, therefore, during any future public consultation period, to examine people's views and ideas about how best to minimise such negative social effects.

**Operating period**

13.33 At minimum for this period consideration will be given to the on and off site employment and gva effects likely to be associated with the Resort's operation together with any related social and exchequer effects.

13.34 The on-site or direct effects of operation will be based on estimates of Resort employment (provided by LRCH) and potential operational profits (before interest and tax) as a proxy for gva. As in the case of construction effects any profits repatriated outside of the UK, and/or operating costs paid to non-regional or foreign suppliers, will be *"netted off"* before applying appropriate regional and national multipliers to assess the likely indirect and induced effects associated with the sites operation. Consideration in this regard will also be given to local and regional data sources to assess potential displacement and non additionality-effects against the future baseline identified previously.

13.35 Of particular importance, in relation to operation, will be to capture the effects on the local, regional and national economies of Resort visitors' off-site expenditure.

13.36 Consideration will (therefore) be given - on the basis of sponsor views, and the performance of comparable attractions elsewhere in Europe - to both the ranges of admissions to the Resort and the split between day trips and domestic and foreign visitors.

13.37 Based on these ranges, and using Visit England stay and expenditure data (across each of these 3 groups), estimates will be provided of likely off-site expenditure patterns (i.e. net

of their on-site expenditure as reflected by the sponsor's visitor income projections).

13.38 Prior to applying relevant employment, multiplier and gva ratios to the subsequent annual off-site expenditure levels it will be important to draw judgements concerning the net effects of visitor (on and off) site spend.

13.39 In the case of UK day visitors their expenditure, on and off site, will be discounted as they are likely to have spent their leisure time (and related expenditure) on alternative UK based leisure activities. On the other hand domestic and foreign tourist expenditure on and off site may be *"additional"* – i.e. the Resort may attract international tourists to the UK who would otherwise not visit and, alternatively, retain UK residents who might otherwise choose to go abroad.

13.40 In the absence of any primary market research concerning domestic and foreign visitors' behaviour or choices in this regard it is proposed to develop a series of scenarios, based wherever possible on research from other similar resorts, such as Disneyland Paris, to outline likely outcomes across *"best and worst case"* ranges (with the latter case being based on the counter factual i.e. without the Resort what might happen anyway).

13.41 In respect of the social and exchequer effects of operation consultations with LRCH and their advisors will examine the policies and operational programmes that might have material positive and negative external effects for the local and regional communities.

13.42 Currently, for example, in relation to potential positive effects the Resort LRCH are considering a range of local employment policies and schools programmes.

13.43 Examination will be undertaken, with LRCH representatives and their advisors, as to the extent and nature of these and other similar proposals in order to identify the likely numbers of *"beneficiaries"*, the types of benefits they are likely to derive as a result of the above and the consequent sources of external data that might be relevant to measuring such benefits in monetary terms.

13.44 At the simplest level, such benefits may be valued in terms of the public sector costs saved (from reduced benefit payments to NEETs for example) and revenues generated (through uplifts in taxes). Where potentially material it may also be possible to add values (from existing research) in terms of the personal effects of such changes over and above the public sector exchequer effects (for example in relation to the various *"revealed preference surveys"* concerning the value of wellbeing associated from being in employment compared to unemployment).

13.45 In relation to potential negative social effects consideration will be given to any material and adverse effects of the Resort (such as health, noise and safety issues related to increased transport movements and reduced rights of way). Analysis will focus on comparable schemes and related mitigation approaches adopted.

13.46 The additional work that could be considered in this context includes:

- Primary market research with each visitor group to assess their future choices with and without the Resort to examine likely net additionality levels – i.e. will the Resort influence and change visitors choice of holiday destination; and,

- Engagement – again during the public consultation process – with representatives from local communities, businesses and social ventures to explore how best the Resort might maximise social and wider effects (and, if relevant, mitigate any potential negative effects).

## ASSESSMENT SIGNIFICANCE CRITIERIA

13.47 Significance criteria, to assess the severity and scale of effects, will be based on:

- Spatial extent (i.e. localised/isolated versus widespread with potential secondary effects);

- Coverage (number of groups and/or people, households or businesses affected);

- Duration (long term or permanent to short term or temporary);

- Frequency; and,

- The scope for mitigation.

13.48 The characteristics against which the overall magnitude of effects will be considered are outlined in Table X below:

**Table 13.4: Assessment of significance magnitude**

| Significance Magnitude | |
|---|---|
| Large | An impact that will dominate over baseline conditions, and/or will be very likely to affect large numbers of businesses and/or people at site, local, regional and/or national levels, and that will usually continue and effectively constitute a permanent, long-term impact over and above the base case conditions. |
| Medium | An impact that can be demonstrated to change the baseline conditions and likely to affect a moderate number of businesses and/or people. |
| Small | An impact that will result in a perceptible difference from baseline conditions and is likely or may affect a small number of businesses and/or people. |
| Negligible | An impact that does not result in a variation beyond the baseline conditions and/or is unlikely to measurably affect the well-being of businesses and/or people. |

13.49 Where quantifiable data is available these definitions may be refined to include specific values. The sensitivity of beneficiaries and non beneficaries (in relation to specific effects both positive and negative) will be assessed (on a qualitative baisis0 using the criteria summarised in Table 13.5 below.

**Table 13.5: Socio-economic effects - significance matrix**

| Beneficiary sensitivity | Definition |
|---|---|
| High | Individuals, businesses or groups that highly value a resource and / or are likely to be particularly sensitive to a given impact. |
| Medium | Individuals, businesses or groups that place an average value on a resource and / or are likely to be moderately sensitive to a given impact. |
| Low | Individuals, businesses or groups that place a low value on a resource and / or are likely to have a low sensitivity to a given impact. |

13.50 Outlining the overall significance (of socio-economic effects) will involve combining these effects with the (previous) magnitude criteria to provide – as detailed in Table 13.6 - a detailed breakdown of relative effects.

**Table 13.6: Overall Significance**

| Significance | | Sensitivity of Beneficiary | | |
|---|---|---|---|---|
| | | High | Medium | Low |
| Impact magnitude | High | Major adverse / beneficial | Major adverse / beneficial | Moderate adverse / beneficial |
| | Medium | Major adverse / beneficial | Moderate adverse / beneficial | Minor adverse / beneficial |
| | Low | Moderate adverse / beneficial | Minor adverse / beneficial | Negligible effect |
| | Negligible | Minor adverse / beneficial or negligible | Negligible effect | Negligible effect |

## POTENITAL MITIGATION MEASURES AND RESIDUAL EFFECTS

13.51 At minimum the analysis will summarise the measures that LRCH will put in place to maximise identified beneficial economic and social effects (at local and regional levels to be defined in consultation with relevant public sector agencies) over the construction and operating periods. Similarly mitigation measures will be identified to address to any negative (economic and social) effects.

13.52 In addition if further work is undertaken it may be possible to identify and suggest how to implement appropriate approaches to addressing specific issues (the latter of which in part could be identified from a consultation programme with local residents, suppliers and public agencies).

## POTENTIAL EFFECTS OF EUROPEAN PROTECTED SITES

13.53 At this stage it is not anticipated that the socio economic effects of the Resort will have any material influence on such sites.

## POTENTIAL TRANS BOUNDARY EFFECTS

13.54 In order to take a considered view of both the environmental and economic 'trans boundary effects' it will be necessary to assess (and evidence) the:

- Total number of international tourists and domestic **visitors** to the site per annum;
- Proportions of the former that are:
  - ***'Non additional'***; i.e. whatever their place of residence they would visit the UK anyway (i.e. in the absence of the resort) and consequently their environmental effects would also occur (and their net UK economic effect would be zero);
  - ***Drawn from outwith the EU28***; – while their environmental effects will be negative these are not included in the current analysis (while their net UK economic effect will be positive); and,
  - ***Both 'additional' visitors and from the EU28;*** – their effects will, in environmental terms, be negative where their mode of travel leads to additional CO2 and related emissions and positive at a UK level in economic terms.

13.55 Equally, in regard to the latter domestic visitors, the proportions that are:

- ***'Non additional'***; i.e. that would otherwise travel to other attractions or spend equivalent income on UK based leisure activities (i.e. at a UK level there may be no additional environmental cost or economic benefit); and,
- ***'Additional'*** i.e. that, in the absence of the resort, would otherwise travel to the EU28 (and consequently while reducing environmental costs at a EU28 level may reduce economic benefits at a non UK level).

13.56 As illustrated, at Table X overleaf, disaggregating in the ways suggested above indicates:

- At a pan EU28 level economic effects are likely to be positive (or at worst net zero)

depending on whether non EU28 tourists would have visited Europe anyway and EU28 visitors to the resort would otherwise travelled to non European locations; and,

- Environmental effects – at a net level – will depend on the difference between the likely negative effect of greater travel distances and increased train, plane or car movements from Europe to the UK compared to the likely positive effects of reduced travel patterns from the UK to European mainland.

**Table 13.7: Potential trans-boundary effects**

| | Economic Effects | | | Environmental Effects | | |
|---|---|---|---|---|---|---|
| ***Visitor Type*** | ***UK Level*** | ***EU28 (excl UK)*** | ***Net*** | ***UK Level*** | ***EU28 (excl UK)*** | ***Net*** |
| Non additional International | 0 | 0 | 0 | 0 | 0 | 0 |
| Non EU28 Additional | +VE | 0 to –VE[38] | +VE to 0 | N/A | N/A | N/A[39] |
| EU28 Additional | +VE | 0 to- VE[40] | +VE to 0 | -VE | -VE to 0[41] | -VE |
| Non Additional Domestic | 0 | 0 | 0 | 0 | 0 | 0 |
| Additional Domestic | +VE | -VE | 0 | 0 | +VE | +VE |

13.57 Consideration will be given, therefore, to the relative materiality of such effects and whether they are likely to be net neutral, positive or potentially negative (and in the latter case what appropriate mitigation approaches might be relevant).

## TOPICS SCOPED OUT OF FURTHER ASSESSMENT

13.58 At this stage no such topics have been identified.

[38] May be negative if, without the resort, these tourists would have otherwise visited the rest of EU28.

[39] Assumes no significant intra EU28 environmental costs.

[40] Depending on proportion of EU28 visitors that might otherwise have visited non EU28 locations.

[41] Depending on 'counter factual travel patterns.

# Fourteen ◆ Waste

## ASSESSMENT CONTEXT

14.1 The London Paramount Entertainment Resort has the potential to generate significant amounts of waste during its construction and operation. A development of this magnitude will put a strain on the existing waste infrastructure in Kent, especially in the Boroughs of Dartford and Gravesham. An increase in waste has the potential to affect both localised and regional waste management infrastructure, which may potentially be running at or near full capacity. Equally, on a more national scale, there is pressure to reduce resource consumption and maximise opportunities for support the circular economy.

14.2 No guidelines exist for the measurement and assessment of impacts on waste generation from new developments. As such, it is proposed that construction and operational waste generation rates will be estimated using industry guidance and waste strategies produced for the site. These estimations will then be compared against the ability of local current and any planned infrastructure to treat this waste (based on plant capacity). Where impacts are deemed significant mitigation methods deployed will be indicated.

## POTENTIAL CONSTRUCTION EFFECTS

14.3 Depending on phasing, waste generated from construction activities can be significant for a whole project and at specific points of a build project. If mitigation measures are not implemented larger pulses of waste creation can occur and become difficult to manage, in terms of management, handling, transport and treatment. These can lead to further impacts related to air quality and transportation issues. Stages, such as the early build stage or the latter fit out are key area of concern and will need to be investigated.

## POTENTIAL OPERATIONAL EFFECTS

14.4 A development of such magnitude will generate substantial quantities of operational waste which will include high levels of food waste and recyclable waste. Operational effects and impacts such as low recycling rates, high residual generation rates, offensive odour, visual and vermin impacts, could arise as a result of poor waste management provision and / or poor waste management in the development. Lack of planning for onsite storage, movement and collection of operational waste could lead to unhygienic or non-compliant waste activities.

## ASSESSMENT METHODOLOGY

### Technical scope

14.5 Waste generation rates will be determined for the construction and operational waste likely to be created at the London Paramount Entertainment Resort. Construction and operational waste and recycling levels will be estimated, reduction measures detailed and overall effects determined.

### Baseline assessment

14.6 In order to assess the effects of the London Paramount Entertainment Resort on waste management, the following baseline data will be examined:

- Replicable developments and similar landuse components will be investigated and any waste strategies (construction and operational) for the site will be consulted to ascertain predicted waste generation rates;
- An understanding of all influential and relevant waste legislation in the Kent area will be obtained; and
- Review of local facilities for waste management and their capacity will be undertaken.

### Effect prediction and assessment of effect significance

14.7 Effects of construction works on the management of waste for the locale will be assessed by consideration of sources and generation rates of construction waste from the proposed development. Ideally this will be obtained from a construction waste management plan or site waste management plan. This will be compared as a percentage against current and future construction waste generation quantities in Dartford and Gravesham Councils and Kent area.

14.8 Making use of the development waste management strategy operational waste generation rates will be extracted. In addition, the proposed mitigation measures for the site assessed in order to develop an evaluation of the effects on local waste infrastructure.

14.9 There are currently no fixed or recommended criteria for assessing the significance of effects arising from the management of waste. Therefore, it is proposed that development is evaluated according to its predicted individual waste characteristics and how they interact with the surrounding provisions for waste management. This assessment is then used to identify opportunities and to respond to policy via means

that reduce any adverse effects, and increase the likelihood of beneficial effects of waste management. It is likely that an ES wide assessment matrix will be used for uniformity, construction and operational impacts will then be categorised e.g. negligible, low, moderate or high.

14.10 The significance of waste effects is determined by type, location and capacity of local and regional waste management facilities and their ability to manage waste in an environmentally and sustainably proficient manner. Effect significance is based on the sensitivity of local waste infrastructure alongside the percentage change against local generation rates in the area. Again, it is likely that an ES wide assessment matrix will be used for uniformity; construction and operational impacts will then be classed. The effect significance before and after mitigation is either: negligible, low, moderate or high.

# Fifteen ◆ Glossary

**Baseline Studies** Work done/used to determine and describe the landscape and visual conditions against which any future changes can be measured or predicted and assessed.

**Biodiversity** - A term developed in the late 1980's and coming to prominence after the 1992 Rio Convention. A general term used to describe all aspects of biological diversity (including: species richness, ecosystem complexity and genetic variation).

**Biodiversity Action Plan (BAP)** - The principle mechanism used in the UK for identifying and delivering nature conservation strategies and objectives at different spatial scales.

**Birds of Conservation Concern (BoCC) (Red List, Amber List)** - A British Trust for Ornithology (BTO) quantitative assessment of the population status of birds in the UK. Seven criteria are used and include (amongst others):

- Red List: globally threatened; historical decline (1800-1995); Rapid (>= 50%) decline/contraction in UK breeding population/range over the last 25 years.
- Amber List: unfavourable conservation status in Europe; moderate (25-49%) decline/contraction in UK breeding population/range over the last 25 years.

**Characterisation** The process of identifying areas of similar landscape character, classifying and mapping them and describing their character.

**Characteristics** Elements, or combinations of elements, which make a contribution to distinctive landscape character.

**Compensation** Measures devised to offset or compensate for residual adverse effects which cannot be prevented/avoided or further reduced.

**Construction Environmental Management Plan (CEMP)** – a plan to manage and monitor the construction phase of a project, in relation to potential impacts and associated control measures.

**Desk Study** - A search for records of historical data relating to habitats and species within a given search area.

**Designated Landscapes** Areas of landscape identified as being of importance at international, national or local levels, either defined by statue or identified in development plans or other documents.

**Development** Any proposal that results in a change to the landscape and/or visual environment.

**Direct Effect** An effect that is directly attributable to the proposed development.

**`Do nothing` Situation** Continued change or evolution in the landscape in the absence of the proposed development.

**Ecological Clerk of Works (ECoW) –** a suitably qualified ecologist appointed to supervise construction works and ensure the appropriate delivery of specified ecological mitigation.

**Ecological Management Plan (EMP) –** a long-term, post-construction, management plan for the protection and conservation of ecological features of interest within the context of the new development.

**Ecological Watching Brief** - The process of on-site supervision, by a suitably qualified ecologist, to ensure that the activities identified within the CEMP and/or EMP are undertaken to the appropriate standard.

**Elements** Individual parts which make up the landscape, such as, for example, trees, hedges and buildings.

**Enhancement** Proposals that seek to improve the landscape resource and the visual amenity of the proposed development site and its wider setting, over and above its baseline condition.

**Feature** Particularly prominent or eye-catching elements in the landscape, such as tree clumps, church towers or wooded skylines OR a particular aspect of the project proposal.

**Field/baseline surveys** - A series of nationally recognised methodologies for gathering current data in relation to specific habitats or species.

**Historic Landscape Characterisation (HLC)** The identification and interpretation of the historic dimension of the present-day landscape or townscape within a given area.

**Homogeneity** - A term used to describe the uniform nature of quality and structure.

**Indirect Effects** Effects that result indirectly from the proposed project as a consequence of the direct effects, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects.

**Key Characteristics** Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.

**Land Cover** The surface cover of the land, usually expressed in terms of vegetation cover or lack of it. Related to but not the same as land use.

**Land Use** What land is used for, based on board categories of functional land cover, such as urban and industrial use and the different types of agriculture and forestry.

**Landform** The shape and form of the land surface which has resulted from combinations of geology, geomorphology, slope, elevation and physical processes.

**Landscape** An area, as perceived by people, the character of which is the result of the action and interaction of natural and/or human actors.

**Landscape and Visual Impact Assessment (LVIA)** A tool used to identify and assess the likely significance of the effects change resulting from development, both on the landscape as an environmental resource in its own right and on people`s views and visual amenity.

**Landscape Character** A distinct, recognisable and consistent pattern of elements in the landscape that makes one different from another, rather than better or worse.

**Landscape Character Areas (LCAs)** These are single unique areas which are the discrete geographical areas of a particular landscape type.

**Landscape Character Assessment (LCA)** The process of identifying and describing variation in the character of the landscape, and using this information to assist in managing change in the landscape. It seeks to identify and explain the unique combination of elements and features that make landscapes distinctive. The process results in the production of a Landscape Character Assessment.

**Landscape Character Types (LCTs)** These are distinct types of landscape that are relativity homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes.

**Landscape Classification** A process of sorting the landscape into different types using selected criteria but without attaching relative values to different sorts of landscape.

**Landscape Effects** Effects on the landscape as a resource in its own right.

**Landscape Quality/Condition** A measure of the physical state of the landscape. It may include the extent to which typical character is presented in individual areas, the intactness of the landscape and the condition of the individual elements.

**Landscape Receptors** Defined aspects of the landscape resource that have the potential to be affected by a proposal.

**Landscape Strategy** The overall vision and objectives for what the landscape should be like in the future, and what is thought to be desirable for a particular landscape type or areas as a whole, usually expressed in formally adopted plans and programmes or related documents.

**Landscape Value** The relative value that is attached to different landscapes by society. A landscape may be valued by different stakeholders for a whole variety of reasons.

**Loafing** – bird behaviour not connected with feeding or breeding, encompassing activities such as preening and resting.

**Local Nature Reserve (LNR)** – a nature reserve designated for both wildlife and educational access under Local Authority powers

**Magnitude of Effect** - A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.

**Mitigation** - The term used to describe actions or approaches to minimising potential adverse effects on species or habitats, as the result of the construction or operation of a proposed scheme. Mitigation may include:

- reduction/minimisation - types of mitigation resulting from changes in scheme design to reduce or removal potential adverse effects.

- amelioration - types of mitigation that may include, for example, methods of working to reduce or remove potential adverse effects.

- relocation/translocation - types of mitigation requiring the removal and re-establishment of a habitat or species away from an area affected by development. Such activities may, or may not require Natural England consent, depending on species or habitat type, but where a licence is not required, the work is most usually undertaken using a Method Statement agreed with Natural England.

**National Vegetation Classification (NVC)** - A nationally recognised standard for surveys, categorising and evaluating vegetation communities and habitats.

**Nature Conservation** - The maintenance of environmental quality (particularly in relation to habitats and species). The term implies sound [nature conservation] management within given social and economic constraints.

**Nocturnal species** - Refers to animals that are active at night.

**Phase I Habitat Survey** - A method for auditing a geographical area to identify habitats or species of nature conservation interest, or their potential presence. Principally used for scoping further, more detailed, ecological surveys.

**Perception** - Combines the sensory (that we receive through our senses) with the cognitive (our knowledge and understanding gained from many sources and experiences).

**Photomontage** - A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.

**Ramsar site** - Wetlands of international importance, designated under the Ramsar Convention. Wetlands are defined as areas of marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres.

**Relocation** - the movement of species or habitats to areas within the development site that will not be affected by construction or operation activities.

**Riverscapes** - Landscape with views of a river and adjacent land with cultural, historical and archaeological links with each other.

**Seascapes** - Landscape with views of the coast or seas, and coasts and adjacent marine environments with cultural, historical and archaeological links with each other.

**Sensitivity** - A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor.

**Significance** - A measure of the importance or gravity of the landscape and visual effect, defined by specific significance criteria.

**Site of Nature Conservation Importance (SNCI) –** a non-statutorily designated local wildlife site

**Site of Special Scientific Interest (SSSI)** - Sites that support a range of habitats and/or species considered to be of national nature conservation interest designated and protected under the WCA 1981.

**Special Areas of Conservation (SAC)** - is an area which has been given special protection under the European Union's Habitats Directive. SACs provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

**Special Protection Area (SPA) –** is an area of land, water or sea which has been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within the European Union.

**Stakeholders** - The whole constituency of individuals and groups who have an interest in a subject or place.

**Study Area** - Usually taken to mean the extent of the Desk Study search.

**Survey Area** - The geographical extent of a particular field survey.

**Susceptibility** - The ability of a defined landscape or visual receptor to accommodate the specific proposed development without undue negative consequences.

**Sward** - A term used to describe the collective assemblage of plants within a given area of grassland.

**Target Note (TN)** – notations of specific features of interest recorded during a Phase I Habitat Survey

**Thermophilic** – warmth loving species

**Time Depth** - Historical layering; the idea of landscape as a `palimpsest`, a much written-over manuscript.

**Tranquillity -** A state of calm and quietude associated with peace, considered to be a significant asset of landscape.

**Transect** - A linear survey route particularly useful for detecting transitions or distribution patterns.

**Translocation** - the movement of species or habitats to a wholly new (receptor) site.

**Townscape** - The character and composition of the built environment including the buildings and the relationships between them, the different types of urban open space, including green spaces, and the relationship between buildings and open spaces.

**Visual Amenity** - The overall pleasantness of the views people enjoy of their surroundings, which provides an attractive visual setting or backdrop for the enjoyment of activities of the people living, working, recreating, visiting or travelling through an area.

**Visual Effects** - Effects on specific views and on the general visual amenity experienced by people.

**Visual Receptors** - Individual and/or defined groups of people who have the potential to be affected by a proposal.

**Visualisation** - A computer simulation, photomontage or other technique illustrating the predicted appearance of a development.

**Zone of Theoretical Visibility (ZTV)/Zone of Visual Influence (ZVI**) - A map, usually digitally produced, showing areas of land within which a development is theoretically visible.

* * *

# Appendix A ◆English Heritage advice

ENGLISH HERITAGE

Mr Peter Price
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DA12 1BQ

Direct Dial: 01483 252038
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Our ref: PA00207385

5 November 2013

Dear Mr Price

**Request for Pre-application Advice**
**SWANSCOMBE MARSHES, GREEN MANORWAY, NORTHFLEET, KENT**

Thank you for consulting us on the screening opinion for the theme park resort proposal at Swanscombe peninsula. We count such cases as pre-application advice and a copy of this letter is also going to Gravesham BC. I think you will have anticipated our response which is that this proposal should be screened in for EIA.

We have reviewed Savills letter of 18th October and we share their conclusion that this project will constitute EIA development. It is likely to give rise to very significant environmental effects, including for the historic environment, and it has the potential to be a development of more than regional significance. As we think this is a clear case for which EIA is appropriate I do not propose to explain here in detail the historic environment issues that it might give rise to. I do however hope that some discussion of these will be useful to all parties particularly with an eye on scoping and agreement of the content and methodology for any Environmental Statement. English Heritage anticipates that the Heritage Conservation team at Kent County Council will be the lead adviser to the local planning authorities about this project. As the owners of the Historic Environment Record we think they are also best placed to provide information on known data and the potential for as yet unknown archaeology or other heritage assets. There are however designated heritage assets about which English Heritage would expect to be consulted and in addition given the scale of the development and the known significance of the archaeology of the Kent Thameside area we anticipate that there will be issues for undesignated remains that we may need to advise about.

I enclose a map of designated heritage assets in or close to the project proposal. Listed buildings are blue triangles and scheduled monuments are pink coloured areas. Savills letter has identified Bakers Hole Palaeolithic site (Kent Mon No 267) as a scheduled monument covering two separate areas which lies within their site boundary but it does not pick up Kent Mon No 268 which is for 2 Neolithic sites in the Ebbsfleet valley that is again scheduled as two areas. One of these appears to be within the project boundary and the other lies on or close to it. Savills have referenced the proximity of the project boundary to the scheduled monument designated to represent the Roman town at Springhead (Kent Mon No 158). Archaeological work for HS1 and other development


Please note that English Heritage operates an access to information policy.
Correspondence or information which you send us may therefore become publicly available.

demonstrated that this nationally significant site extends north of the A2 and also that the use of the site also pre and post dates the Roman period. There are few listed buildings in the site boundary but others lie very close to it and therefore issues for their setting might be relevant. In Gravesham district the former Dartford cement works contains two grade II listed structures, a lighthouse and a war memorial. The Factory Club is also grade II listed and appears to probably be within the project boundary. There is a group of listed buildings that represent the core of the historic settlement at Northfleet, including the grade I listed parish church. This settlement is also a conservation area. The settlement appears to be close to but not within the project boundary. Also close to the boundary in Dartford district is the grade II * listed church at Swanscombe. Further grade II listed buildings or structures appear to lie close to the project boundary, a house on Knockhall Road and two structures associated with the historic landscape at Ingress park.

English Heritage is not actively considering designation of any additional assets within the project boundary but this must not be taken to mean that this is not a possibility or that the site of the proposal does not contain historic environment assets of a significance that might justify their designation. Requests for designation might be made to us once the extent and nature of the proposed development becomes more widely known. A rapid check on the information available publicly online for the Kent Historic Environment Record has confirmed that a number of sites are already known in the project area and based on our experience from other nearby large scale developments we can expect that much more of significance will exist. Where these are archaeological remains of a significance that is equivalent to a scheduled monument para 139 of the NPPF advises planning authorities to treat these as if they were scheduled. The HS1 archaeological project revealed undesignated archaeological remains of national and international importance and it would be very surprising if such a large proposal as this in this part of Kent did not also raise similar issues. The assessment of known archaeology and the potential for as yet unconfirmed remains will need to be carried out to similar standards as that for HS1 and English Heritage would be willing to provide advice about this aspect, alongside our colleagues at Kent County Council.

Our knowledge of the project area is shaped by the extent of past investigations and studies and these have most recently been development led. Our understanding of the Ebbsfleet valley has been transformed by the HS1 archaeological programme and other developer funded investigations but it remains the case that this part of the project area has further high potential for survival of nationally significant archaeological remains. These remains require management and if they cannot be preserved it is likely that their investigation and study would require a major programme of work. This part of Kent has significance for a wide range of periods but there is a specific focus on the Palaeolithic archaeology of the Thames gravels and the potential to understand our most distant ancestors and the environments they occupied. The

EASTGATE COURT 195-205 HIGH STREET GUILDFORD SURREY GU1 3EH
Telephone 01483 252000 Facsimile 01483 252001
www.english-heritage.org.uk
Please note that English Heritage operates an access to information policy.
Correspondence or information which you send us may therefore become publicly available.

POSITIVE ABOUT DISABLED PEOPLE

Swanscombe skull site and the Ebbsfleet elephant butchery site (from HS1) are but two examples of remains of the highest significance. As one moves on to the peninsula proper less is known about its historic environment and existing records cluster around the shoreline as this is where systematic survey has been most active. The alluvial nature of the marshes and the lack of major recent development activity combine to mean that our understanding of the historic development of the peninsula is poor. This lack of confirmed evidence must not however be taken to mean that nothing of significance will exist. The Swanscombe marshes will justify careful consideration in an Environmental Statement for this proposal.

To sum up we firmly believe that this development proposal must be screened in for EIA and we will work with you, the project proposers, Gravesham BC and Kent County Council to first better understand and then respond to the historic environment significance of the project area. When scoping of an Environment Statement might become relevant we would welcome the opportunity to offer further advice then.

Kent County Council led an Interreg project called Planarch and this produced best practice guidance for how to address historic environment issues within the EIA regulations and I enclose a summary document that might be helpful to all parties.

Yours sincerely

**Peter Kendall**
Principal Inspector of Ancient Monuments
E-mail: Peter.kendall@english-heritage.org.uk

cc Kent County Council
Dartford BC
Savills

**SWANSCOMBE MARSHES, GREEN MANORWAY, NORTHFLEET, KENT**
**Request for Pre-application Advice**

**Information Provided**
Planarch best practice guidance for cultural heritage in EIA.

**Published Guidance**



POSITIVE ABOUT DISABLED PEOPLE

# Swanscombe peninsula area -listed buildings SAMs

| | | |
|---|---|---|
| | Date | 30/10/2013 |
| | Scale | 1:20,000 |
| | Centre | 560891,174060 |


ENGLISH HERITAGE
1 Waterhouse Square, 138 -142 Holborn, EC1N 2ST
Tel: 020 7973 3000 Fax: 020 7973 3001
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## The Planarch 2 partners

Kent County Council (UK) – Lead Partner
Heritage Conversation Group
Invicta House, County Hall
Maidstone, Kent ME14 1XX England
www.kent.gov.uk

Essex County Council (UK)
County Hall, Chelmsford
Essex, CM1 1QH England
www.essex.gov.uk

Rijksdienst voor het Oudheidkundig Bodemonderzoek – ROB (N)
Postbus 1600, 3800 BP
Amersfoort, Nederland
www.archis.nl

Vlaams Instituut voor het Onroerend Erfgoed – VIOE (B)
Phoenix Building, Koning Albert II – laan 19, bus 5
1210 Brussel, Belgie
www.monument.vlaanderen.be

Universiteit Gent (B)
Vakgroep Archeologie en Oude Geschiedenis van Europa
Blandijnberg, 2, 9000 Gent, Belgie
www.ugent.be

Ministere de la Region wallonne – DGATLP (B)
Service de l'Archeologie en province de Hainaut
Place du Beguinage 16
B 7000 Mons, Belgique
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Institut National de Recherches Archeologiques Preventives
INRAP – (F),
Direction nterregionale Nord-Picardie
518 rue Saint Fuscien
80000 Amiens, France
www.inrap.fr

Landschaftverband Rheinland
Rheinisches Amt fur Bodenkmalpfege – RAB-(D)
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www.bodendenkmalpfledge.lvr.de

English Heritage (UK) - Associate Partner

University of Manchester (UK) - Associate Partner

Planarch has been co-funded by ERDF through the Interreg IIIB Programme – (NWE)

**www.planarch.org**

# Guiding Principles for Cultural Heritage in Environmental Impact Assessment (EIA)

### Planarch

The Interreg Planarch project aims to further the protection and management of the cultural heritage, particularly the archaeological heritage, through its greater integration in spatial planning. The Planarch 2 partners (from Belgium, England, France, Germany and The Netherlands) have carried out a review of the cultural heritage component in EIA, assessing the strengths and weaknesses of present practice, in the light of which the guiding principles in this document have been formulated.

### Environmental Impact Assessment

Development and related activities can have significant impacts on the environment. Assessing such impacts to minimise significant damage, including effects on the cultural heritage, is fundamental to the spatial planning process. The European Union, through the EIA Directive and more recently the SEA Directive has set out frameworks within which member states should develop their own measures. The guiding principles in this document aim to improve best practice for EIAs in respect of the cultural heritage.

### What is Cultural Heritage?

Cultural heritage embraces all those remains and remembrances which link us to our past, whether in the landscape around us or in the arts, languages or traditions. It helps us to understand long term social and environmental change. In the context of EIA it includes physical remains of the past – historic buildings and structures, archaeological sites and monuments, artefacts, palaeo-environmental deposits, historic landscapes and townscapes, and marine heritage.

PLANARCH

### Why Cultural Heritage matters

Cultural heritage is an essential part of sustainability. It is non-renewable: once the evidence of the past has been destroyed, it can never be replaced. It is a valuable resource with the potential to increase knowledge and is an excellent vehicle for wider educational objectives. It contributes strongly to people's sense of place and identity. It has important social and economic roles for community development, regeneration, access, leisure and tourism.

### Cultural Heritage in EIA

In assessing cultural heritage within EIA procedures the purpose should be to

- minimise loss of and avoid adverse impacts on an important aspect of the environment in which we live.
- ensure that cultural heritage is incorporated in spatial planning, social, economic, education and access strategies affecting the study area.
- improve understanding of cultural heritage and the contribution it can make to broader agenda.
- ensure that, where the cultural heritage cannot be preserved, appropriate investigation, recording and communication is undertaken.

The results of the EIA process are an integral part of the decision-making process.

# Guiding Principles

**These operational principles are intended to provide a rigorous, robust and reasonable framework for ensuring that cultural heritage is appropriately treated in the EIA process**

1. All aspects of cultural heritage shall be covered.
2. *Cultural heritage expertise shall be integrated into all stages of EIA,* from screening through to implementation.
3. The description of the project requiring assessment shall be sufficiently clear and detailed to allow identification of all impacts that could affect the cultural heritage.
4. The study area shall be large enough to allow a clear understanding of the cultural heritage and the extent of potential impacts upon it.
5. All cultural heritage surveys and investigations shall be of a high standard sufficient to allow informed decisions to be taken.
6. All beneficial and adverse impacts on cultural heritage shall be assessed. These shall include direct, indirect, temporary, permanent and cumulative effects.
7. The assessment of the significance of any impacts on the cultural *heritage resource shall take account both of its intrinsic value and* how much it will be changed. This shall be explained in relation to relevant international, national and local legislation and policy. The basis for any statements concerning value or importance shall be explicit.
8. The likely effects on cultural heritage assets of alternative scenarios, including doing nothing, shall be considered.
9. A variety of approaches to mitigation shall be considered, including design modification, appropriate investigation and recording *measures. Provision shall be made for unforeseen effects. All* proposed mitigation shall be realistically achievable and agreed actions, including responsibility for their implementation, shall be fully monitored and documented.
10. All communication relating to cultural heritage in EIAs shall be clear, focused and accessible to the non-specialist. All documentation shall be archived and indexed in a clearly traceable manner.

PLANARCH

# Appendix B ◆Kent County Council advice

**Planning & Environment**

Invicta House
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MAIDSTONE
ME14 1XX

Phone:
Ask for:
Email:

Sonia Bunn
Dartford Borough Council
Civic Centre,
Home Gardens,
Dartford
DA1 1DR

7th November 2013
Your Ref:
Our Ref: P/DA/3

Dear Sir/Madam

**Request for a screening opinion under the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (Regulation 5) to determine whether an EIA is required for the redevelopment of land to provide a leisure resort of up to 747,000sqm plus external hotel operations, car parking and transport interchanges, and support facilities.**

The County Council welcome the opportunity to comment on the above screening opinion.

**The Proposal**

The proposal is for a resort, leisure entertainment and theme park alongside delivering new infrastructure, employment generation and remediation of derelict and contaminated land. The land comprises of 198ha of primarily brownfield land on the Swanscombe Peninsula and the proposal includes;

- Leisure resort of up to 747,000 sqm including
  - Entertainment street
  - Water park
  - 3 hotels (1,500 rooms)
  - Theme park
  - Events space
  - Service buildings (27,000sqm)

- Staff apartments (2,500)
- Bus park (300 spaces)
- Transport plaza (3,500 sqm)

**Paul Crick**
Director of Planning and Environment

- Bus station and drop off point (6,000 sqm)
- Staff training academy
- Staff parking
- Visitor car park (8000 with additional overflow of 6,000)
- River taxi access

**KCC response**

The County Council agree with the applicant's conclusion that a development of this size justifies the need for and EIA to be prepared in accordance with the 2011 Regulations.

However, the prospective applicant's intentions/proposals are insufficiently clear at this stage and further information should be required in order to establish the full extent of what is proposed, particularly as it remains to be decided which is the relevant planning authority for determining the various elements of what KCC understand would be required to enable the development to proceed (including land remediation and landraising).

A number of additional comments are provided below.

**Socio-Economic Impacts**

There are a number of areas identified in the Site Plan that are outside the main Leisure Core Zone that will impact on development sites that already have outline planning consent. The applicant will need to demonstrate what impacts the development will have on wider development across the area.

The applicant will need to provide information on the level of employment it expects to generate, the split between permanent and part-time employment, the range of skills that would be covered and the types of employment, the seasonality of employment, the catchment area for employment and how the expected levels of employment relates to supply.

There are retail and event/exhibition elements to the proposed development and the applicant will need to provide an assessment of how this will impact on existing provision in the wider area.

**Transport**

A development of this size and complexity will require a comprehensive Transport Assessment, and Kent Highways Services would wish to be involved and to assist with the process at the earliest opportunity. Many of the elements of the Transport Assessment will overlap with other categories of the EIA, and the initial scoping by the planning authorities will include the potential impact on their statutory documents (such as the potential loss of housing land at the western end of Northfleet Embankment and the need for KCC to consider the impact on any aggregate import activities long the Thames wharves). Many of the activities on the various areas of land within the Paramount site are yet to be clearly defined, and KCC's understanding is that not all of the land involved is within the control of the applicant. The earlier these matters are addressed, the easier it will be for us all to work together.

KCC would seek early engagement with the developer's consultants to allow us to prepare a scope for this transport document. This will involve both local planning authorities, KCC as local highway authority, and the Highways Agency as strategic highway authority.

The applicant will need to provide information regarding the distribution of the forecast 12-15 million visitors per annum across the year identifying average daily attendance and the peak periods within the year with estimates of the daily level of attendance at these times. In terms of the daily attendance information will also be needed how this varies throughout the day and the peak periods.

The applicant will need to provide information on how staff are expected to get to and from the site along with any shift patterns. The applicant will be expected to provide an outline of a Staff Travel Plan.

The applicant will need to provide information on the modal split for both visitors and staff.

The applicant will need to conduct a transport impact assessment covering both the local and strategic highway network and the public transport infrastructure. This will need to identify where improvements are needed to both the highway and public transport infrastructure to mitigate the impacts of the development. A Transport Impact Assessment will be needed for both the planned development and for the construction period. In the case of the construction period particular attention will need to be given to the routes for construction traffic and the transport of materials to the site.

In addition to the above the proposed development includes 2,500 dwellings for the accommodation of staff. The applicant will need to provide further information on the type of housing that is to be provided and how it will be managed so that an assessment of the demand for services can be made.

**Heritage**

The site includes the Baker's Hole SSSI and Scheduled Monument which are designated for palaeolithic archaeology and also lies immediately adjacent to the Scheduled Monument of Springhead Roman site. In addition the red line of the application site includes the Scheduled Monuments of Aspdin's Kiln and parts of two neolithic sites adjacent to the River Ebbsfleet. It also includes nationally important archaeological remains of palaeoltithic and neolithic date which are currently undesignated, and extensive archaeological remains of all periods which are of at least regional importance. Furthermore the proposed development is likely to affect the setting of several listed buildings including the church of All Saints, Galley Hill, SS Peter and Paul, Swanscombe and Ingress Abbey, and that of the SSSI and NNR of the Swanscombe Skull site.

KCC Heritage team would be happy to discuss any of the above in more detail with the applicant and would expect that archaeology would form a major part of the ES. It is important in this respect that the applicant uses appropriately qualified archaeological experts including someone with a specialism in the palaeolithic archaeology of the area. It would also be expected that the applicant would contact English Heritage in relation to the impact on the Scheduled Monuments.

**Public Rights of Way**

The County Council's PROW and Access Service would like the EIA to consider the impacts on the use of the existing Public Rights of Way, including;

- The accessibility of current Public Rights of Way
- The potential provision of alternative Public rights of Way
- The potential impact on views and enjoyment from existing routes
- The potential impact to accessible open space with uninterrupted views of the river.
- The connectivity between the Thames Cycle Path, as being developed by KCC/DBC and Sustrans, between Ingress Park riverside and Ebbsfleet International.

The Thames Cycle Path link is a critical point which in essence is a dedicated traffic free pedestrian/cycle avenue through the site, between Ebbsfleet International and the Thames at Greenhithe would make for a key recreational and tourism link to and from Dartford.

**Minerals and Waste**

KCC's Planning Application Group have already been involved in discussions with London Paramount about the relationship between its overall proposals for a leisure park and any waste management development such as waste transfer and the deposit of waste (for which KCC may be the determining authority).

Parts of Swanscombe Peninsula (owned/operated by Lafarge Cement) are still subject to requirements associated with waste planning permissions for which KCC still has responsibility and the proposed site immediately abuts the mineral wharf and associated works operated by Cemex (proposed to be safeguarded in the emerging Minerals and Waste Local Plan). It is specifically worth noting that parts of the Swanscombe Peninsula site (e.g. South Pit 3) do not appear to have been fully restored in accordance with the relevant waste planning permissions which were dealt with by KCC.

The 2nd paragraph of the letter refers to the need for the "remediation of large areas of derelict and contaminated land" although there is no further reference to this. This could be misleading as such works would give rise to significant impacts that should be fully addressed in any EIA if the application is to include these. Indeed, subject to the extent of those works, EIA may specifically be required for any landraising element under Regulation 11(b) [installations for the disposal of waste] of the EIA Regulations regardless of any considerations under Regulation 10(b) [urban development projects].

KCC have already advised[1] that if a single application were submitted for the entire project (i.e. the importation, handling, storage, treatment and disposal of waste materials / creation of a development platform and development of Paramount Park) it is likely that KCC would accept that this be dealt with by the relevant Borough Council(s). However, KCC were advised that such an approach was unlikely. As a result, KCC consider that in the absence of a planning permission which includes provision for a development platform involving land raising, KCC should determine any application(s) for the importation, handling, storage, treatment and disposal of waste materials as Waste Planning Authority and Dartford and/or Gravesham Borough Council's should determine any application(s) for Paramount Park itself. KCC were advised that this approach was consistent with how similar proposals have been dealt with in Dartford (e.g. Craylands Lane Pit) and elsewhere.

There has been no further communication since this time and so KCC are not clear which approach to obtaining the necessary planning permission(s) that London Paramount intends

[1] Kevin Doyle London Paramount (June 2013)

to adopt. This has significant implications for the submitted screening request and any scoping opinion that may subsequently be sought.

The plan accompanying the screening request also gives rise to additional concerns since it includes land at Northfleet Works where KCC has granted permanent planning permission for a Bulk Aggregates Import Terminal (BAIT). The site is currently utilised by Crossrail for a tunnelling logistic facility under a temporary permission. The BAIT is also proposed to be safeguarded in the emerging Kent Minerals and Waste Plan along with other wharves in the area which, based on the submitted plan, could also be adversely affected contrary to adopted and emerging Minerals and Waste Plan policies. Other land included within the red line defined on the plan is also currently subject to ongoing waste related restoration and aftercare requirements and associated monitoring and KCC are also dealing with an application at Church Path Pit for the creation of a development platform and temporary stockpiling of materials. Clarification is urgently needed on these and related issues since they have the potential to undermine the emerging Minerals and Waste Plan (in terms of imported aggregates).

**Ecology**

KCC advise that under Regulation 61 of the Conservation of Habitats and Species Regulations 2010 (as amended), before granting permission for a plan or project which (a) is likely to have a significant effect on a European site, and (b) is not directly connected with or necessary to the management of the site, the local planning authority as the competent authority must make an appropriate assessment of the implications for that site.

Although the nearest European site to Swanscombe peninsula is over 6km away, the scale of the project and the numbers of people that the applicant is expecting to attract are such that there is potential for these to result in additional pressures on the north Kent European sites. The applicant must provide information to enable the local planning authority to determine whether an appropriate assessment is required and we advise that given recent bird disturbance work undertaken in north Kent, this should in particular include consideration of the potential for increased levels of recreational disturbance.

I trust you will find these comments useful.

Yours sincerely,

On behalf of the Director of Planning and Environment

Cc Clive Gilbert Service Development Management Gravesham Borough Council

# Appendix C ◆Transboundary screening matrix

**London Paramount Entertainment Resort**

**Transboundary Screening Matrix**

| Criteria | Relevant consideration | Comment |
|---|---|---|
| Characteristics of the development | What is the size of the development?<br>Use of natural resources<br>Production of waste<br>Pollution and nuisances<br>Risk of accidents<br>Use of technologies | The London Paramount Entertainment Resort (hereafter referred to as London Paramount) would be the largest entertainment resort in Europe covering an area of approximately 537 hectares on land at Swanscombe Peninsula. The proposed development is described in Chapter 3 of the EIA Scoping Report and can be summarised as:<br><br>• a core 'studio park', featuring a range of events spaces, rides, studio attractions, cinemas, theatres, a water park, an open-air arena, night clubs, catering, retail and amenity facilities themed around the films and television programmes of Paramount Studios and UK producers.<br>• c. 30,000 square metres ($m^2$) of event space for conferences and trade shows.<br>• Staff training facilities.<br>• a range of hotels with a combined total of c. 5,000 bed spaces.<br>• a country park beside the River Thames.<br>• landing zones for access from the Thames.<br>• c. 14,000 car parking spaces, located partly in multi-storey facilities set within a former quarry, and bus and coach parking.<br>• a new four-lane dual carriageway to between the core resort area and the A2(T) / B259 junction.<br>• flood prevention works.<br>• landscape works throughout the development, incorporating earth shaping, new planting and habitat creation.<br>• provision of service infrastructure including water, electricity and gas supplies, telecommunications and arrangements for water and wastewater treatment and disposal. |

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| | | As far as possible, LRCH intends that the project will be a self contained development. However, subject to the outcome of the current design process and EIA work, it may also include 'associated development' (Section 115 of the Planning Act 2008) in locations outside the red line boundary, which could include all or some of the elements listed below:<br><br>• works to roads and footpaths;<br>• diversion or realignment of watercourses;<br>• the construction of new road, rail or footbridges;<br>• railway works;<br>• jetties;<br>• parking spaces for workers or users of the principal development;<br>• public transport infrastructure and services;<br>• construction compounds, temporary haul roads, vehicular marshalling facilities and construction laydown areas;<br>• connections to electricity, gas, telecommunications, water, and wastewater networks;<br>• landscape and planting works;<br>• flood defences and flood mitigation measures;<br>• water balancing facilities;<br>• creation of compensatory habitats or replacement green space;<br>• noise barriers;<br>• security measures. |
| Geographical area | What is the extent of the area of a likely impact under the jurisdiction of another country? | The European Economic Area (EEA) States comprise: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, the UK, Iceland, Liechtenstein and Norway. |

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| | | To assess the likely extent of the geographical impact of London Paramount at this initial stage of the EIA process, a maximum five hour travel time zone has been applied. It has been assumed that travel would occur by car, train, ferry or aircraft (or a combination of all of the above). Given the location of UK ferry ports, train stations and Eurotunnel services that could be reasonably used to access London Paramount, a maximum travel radius of 240km from the port of Calais has been applied. A maximum travel time of three hours from UK airports near London to EEA State airports has been used. The travel time assumptions includes travel within the EEA State to transport hub / facility, check-in timescales and travel within the UK to the Project Site.<br><br><u>Locations with Eurostar service (and local train network) to Ebbsfleet Station and within a 5-hour travel time</u><br><br>• 2 hours: Calais, Lille (France) and Brussels (Belgium)<br>• 3 hours: Calais, Lille, Paris, Disneyland Paris (France), Brussels, Ghent, Antwerp (Belgium)<br>• 4 hours: Calais, Lille, Paris, Disneyland Paris (France), Brussels, Antwerp, Liege, Namur, Bruges, Oostende (Belgium), Aachen (Germany) and Rotterdam (Netherlands)<br>• 5 hours: Calais, Lille, Paris, Disneyland Paris, Le Mans, St. Pierre Des Corps, Le Creusot, Reims, Rouen, Chalon en Champagne, Nancy (France), Brussels, Antwerp, Liege, Namur, Bruges, Oostende (Belgium), Aachen, Cologne (Germany) and Rotterdam, Amsterdam, Schiphol (Netherlands)<br><br><u>Locations which could access the UK via Eurotunnel</u><br><br>• Calais to Folkestone - providing access to regions of France, Belgium, Luxembourg, the Netherlands and Germany (by car and train) |

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| | | <u>Locations which could access the UK by car ferry</u><br><br>• Calais to Dover - providing access to regions of France, Belgium, Luxembourg, the Netherlands and Germany (by car and train)<br><br><u>Locations able to access the UK by commercial aircraft</u><br><br>EEA State Locations able to access City of London Airport, Gatwick Airport, Southampton Airport, London Luton Airport and London Stansted Airport within **3 hours** flight time (assumes average of 1 hour to travel to airport and 1 hour to check in an depart) comprises<br><br>Austria / Belgium / Bulgaria / Croatia / Czech Republic / Denmark / Estonia / Finland / France / Germany / Hungary / Ireland / Italy / Latvia / Lithuani / Luxembourg / Malta / Netherlands / Norway / Poland / Portugal / Romania / Slovakia / Slovenia / Spain / Sweden / Switzerland<br><br>It is our view that the EEA States that have the potential to experience significant transboundary effects include France, Belgium, Netherlands and Germany. |
| Location of development | What is the existing use?<br><br>What is the distance to another country? (Name country(ies) | For a detailed description of the location and spatial extent of the Proposed Development, see chapter 3 of the EIA Scoping document.<br><br>The Project Site comprises approximately 537 hectares of land at Swanscombe Peninsula (see figure 1.1 – 1.6 of the EIA Scoping report). The Project Site currently comprises a combination of Cement Kiln Dust (CKD) tips and degraded post-industrial land, together with a car park and access roads associated with Ebbsfleet International Station. |

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| | | The shortest to a neighbouring EEA state is France at approximately 120km. Other EEA states which could potentially experience transboundary effects are listed in the 'geographical area' section of this table and include Belgium (c. 200km), Netherlands (c. 220km) and Germany (420km). |
| Cumulative impacts | Are other major developments close by? | Nearby major tourism developments include Disneyland Paris. |
| Carrier | By what means could impacts be spread? | It is considered that potential transboundary effects could include traffic and transport, air quality and economic effects. The direct pathway for the transmission of these effects could be by travel modes including car, ferry, train and aircraft.<br><br>Significant traffic and transport effects could occur where visitor trips between EEA States and the UK give rise to transportation capacity problems (particularly in sensitive areas) which cannot be mitigated.<br><br>Significant air quality effects could occur where increases in trips between EEA States and the UK give rise to traffic-related emissions which have an adverse effect on residential properties in terms of local air quality, or ecologically sensitive designated sites and cannot be mitigated.<br><br>Significant economic effects could occur where the proposed development has either a positive or negative effect on the economy of an EEA State. Negative effects could occur through the redistribution of visitors from EEA State visitor attractions to the UK and / or where business opportunities are created in the EEA States (directly or indirectly) as a direct result of the Proposed Development. |
| Environmental importance | Are particular environmental values (e.g. protected areas – name them) likely to be affected?<br>Capacity of the natural | The Thames Estuary & Marshes SPA/Ramsar lies approximately 7.5km to the east of the Proposed Development, The Medway Estuary & Marshes SPA/Ramsar, 19km to the east, and The Swale SPA/Ramsar lies a further 32km to the east of the Proposed Development. All of these sites are designated for their importance in supporting a variety of breeding, overwintering and passage migrant birds along the Thames |

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| | environment<br>Wetlands, coastal zones, mountain and forest areas, nature reserves and parts, Natura 2000 sites, areas where environmental quality standards already exceeded, densely populated areas, landscapes of historical, cultural or archaeological significance. | estuary and north Kent coast. These site have been subject to studies relating to the potential for new housing development to cause recreational disturbance associated with increases in the resident population, and requirements for Suitable Alternative Natural Greenspace, to ameliorate any such potential increases in recreational disturbance. |
| Extent | What is the likely extent of the impact (geographical area and size of the affected population)? | **Geographic extent**<br><br>The likely geographical extent of significant transboundary effects is set out in the 'geographical area' of this table.<br><br>The various regions of France, Belgium, Luxembourg, the Netherlands and Germany that are located within this zone, and their respective populations are set out below:<br><br>• Regions of France<br>➢ Nord Pas de Calais: c. 4m population<br>➢ Picardy: c.2m population<br>➢ Upper Normandy: c.3.4m population<br>➢ Lower Normandy: c.1.5m population<br>➢ Champagne: c.1.3m population<br>➢ Ile of France: c.12m population<br>➢ Centre: c 2.5m population<br>➢ Burgundy: c1.6m population<br><br>• Population of Belgium c. 11m |

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| | | • Population of Luxembourg: c.550,000<br><br>• Population of Netherlands c. 18m<br><br>• States of Germany<br>➢ North Rhine-Westphalia: c.17.8m population<br>➢ Rhineland-Palatinate: c.4m population<br>➢ Saarland: c.1m population<br><br>People living within these regions could reasonably chose to visit London Paramount.<br><br>**Visitor numbers**<br><br>LRCH estimates that approximately 30% of the visitors to London Paramount would be overseas visitors and that these visits could equate to approximately 16,000 people per day. However, it should be noted that many of these people would already by visiting the UK and would most likely be staying in the region anyway.<br><br>It has not be possible to undertake a detailed assessment of the potential tourism effects of London Paramount at this stage. A high-level assessment of the potential for transboundary effects in terms of tourism / socio-economic effects has therefore been undertaken through a desktop review of Disneyland Paris – a comparable development.<br><br>Data available on the Disneyland Paris website indicates that 14.9 million people visited Disneyland Paris in 2013. 51% of guests were from France, 14% from the UK, 6% from Benelux (Belgium and Luxembourg), 6% from Netherlands, 8% from Spain, 3% from Italy, 3% from Germany and 9% from the rest of the world (source: www.corporate.disneylandparis.com official Disneyland Paris website). |

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| | | This equates to the following approximate visitor numbers per annum:<br><br>• France 7,599,000<br>• UK 2,1000,000<br>• Benelux 894,000<br>• Netherlands 894,000<br>• Spain 1,192,000<br>• Italy 447,000<br>• Germany 447,000<br>• Rest of World 1,341,000<br><br>This equates to approximately 5,800 UK visitors per day.<br><br>It is proposed that London Paramount would attract a similar number of visitors to Disneyland Paris (up to 15m per annum). The composition of international visitors is also likely to be similar, although the number of UK visitors would be higher.<br><br>If 30% of visitors to London Paramount are overseas visitors, this could equate to 4,500,000 visitors per annum, 375,000 per month or c.12,500 per day.<br><br>A proportion of visitors are likely to be 'first time' visitors to an entertainment resort of this type, while others would chose to visit London Paramount instead of Disneyland Paris, or other comparable resorts.<br><br>It is currently considered that London Paramount would act as the primary destination for visitors. The potential for those visitors to disperse along the north Kent coast in sufficient numbers to cause disturbance to European Wildlife Sites, to the extent that transboundary effects in EEA states could occur, is considered negligible. |

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| | | **Travel modes**<br><br>As highlighted earlier, people would be expected to travel to London Paramount by a car, ferry, train or aircraft.<br><br>By way of example, P&O ferries carry more than 10 million people per year (source: www.poferries.com) and they operate six routes from the UK (Dover – Calais, Hull-Rotterdam, Hull-Zeebrugge, Cairnryan-Lame, Dublin-Liverpool and Troon-Lame). For the purposes of this assessment the 10 million visitors per annum has been split equally between the 6 routes giving approximately 1.6 million visitors per annum per route. This would equate to approximately 138,000 visitors per month or 4,629 people per day travelling on the Dover-Calais services.<br><br>Approximately 50,000 people use the channel tunnel each day on Eurostar high speed services and the Le Shuttle service (source: 'The Channel Tunnel: 20 fascinating facts' article, 6th May 2014, www.telegraph.co.uk).<br><br>It is therefore reasonable to assume that at least 55,000 travel between the UK and Calais daily using train and ferry services. However, it is not possible to say at this stage whether these services are at operating capacity.<br><br>It has not been possible to obtain data for the number of people travelling between the specified UK airports and the EEA States. A proportion of visitors would travel to London Paramount by aircraft and, based on a robust forecast of new visitor trips to the UK generated by the development on any day, it might be reasonable to estimate that around 16 additional planes might be generated to accommodate the development visitors of a typical day. This equates to around 0.5% of the air traffic into London Airports and would not be material. For context, Heathrow currently handles approximately 1400 planes a day. Therefore, in the context of daily movements from London airports this is unlikely to effect flight scheduling or capacity |

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| | | and would therefore be insignificant<br><br>If as many of the French population visited London Paramount as the UK population visited Disneyland Paris, then it could be assumed that approximately 10% of daily people movements between France and the UK (via Calais and Dover / Folkestone) could be attributed to London Paramount.<br><br>It is unlikely that 10% of all trips to the UK from EEA states via car, train, ferry or aircraft could would be directly and solely related to London Paramount and therefore in reality this percentage in respect of London Paramount would be lower. Furthermore, it is likely that the number of trips directly related to London Paramount would progressively decrease the further away the EEA state is from the UK because journey times and associated travel costs would increase.<br><br>It is therefore concluded that the number of trips to the UK from EEA States directly and solely related to London Paramount would be insignificant and would be unlikely to have a significant environmental impact on EEA States. |
| Magnitude | What will the likely magnitude of the change in relevant variables relative to the status quo, taking into account the sensitivity of the variable? | Ecology: negligible<br><br>It is considered that if any potential for disturbance effects on European Wildlife Sites situated in the Thames estuary and along the north Kent coast (resulting from increases in visitors attracted by the Proposed Development) are identified, these effects would be localised. Similarly, works associated with the construction of a jetty, associated dredging works, or its operations would also be highly localised. Consequently, it is considered that the Proposed Development would not have any potentially significant adverse transboundary ecological effects.<br><br>Traffic and transport: negligible |

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| | | In the context of the daily people trips between the UK and EEA States, it is likely that the increase in trips that could be attributed to London Paramount would be negligible and that many of the overseas people visiting London Paramount would already be staying in the region anyway. It is therefore likely that the existing transport network would be able to accommodate the increase with only limited upgrades.<br><br>Air quality: negligible<br><br>As the increase in trips between the UK and EEA states attributed to London Paramount is considered negligible, it is likely that emissions of traffic related pollutants in EEA States that are directly attributable to London Paramount will be insignificant in terms of effects on the local air quality of residential properties near major transport routes and environmentally sensitive designations.<br><br>Socio-economic: negligible<br><br>London Paramount may result in a reduced number of people visiting entertainment resorts in EEA States which may result in reduced gross domestic product in certain states. However, in the context of the overall tourism numbers for the EEA States identified, any potential reduction is likely to be negligible small and the effects on economies insignificant. It is considered that the overall level of GDP within EEA States could increase as a result of the operation of London Paramount. |
| Probability | What is the degree of probability of the impact?<br><br>Is the impact likely to occur as a consequence of normal conditions or exceptional situations, such as accidents? | The effects identified would be likely to occur as a result of normal activities. |

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| Duration | Is the impact likely to be temporary, short term or long term?<br><br>Is the impact likely to relate to the construction, operation or decommissioning phase of the activity? | The effects identified would be long term in duration (i.e. for the lifetime of London Paramount) and would relate to the operation of London Paramount. Construction phase effects on EEA member states are not considered likely. |
| Frequency | What is likely to be the temporal pattern of the impact? | Effects would occur throughout the year and would be consistent with the resort's hours of operation. |
| Reversibility | Is the impact likely to be reversible or irreversible? | While London Paramount is operation the negligible effects would not be reversible. |

Figures

LONDON
Tilbury
Dartford
Gravesend
Grays
Thames
Canvey Island
Basildon
Southend-on-Sea
Clacton-on-Sea
West Mersea
Witham
Maldon
Chelmsford
Harlow
Sawbridgeworth
Hertford
Ware
Hatfield
St Albans
Hemel Hempstead
Tring
Princes Risborough
High Wycombe
Amersham
Beaconsfield
Maidenhead
Windsor
Slough
Watford
Rickmansworth
Harrow
Barnet
Finchley
Ilford
Dagenham
Brentwood
Epping
Chipping Ongar
Billericay
Burnham-on-Crouch
Rayleigh
Grain
Sheerness
Isle of Sheppey
Herne Bay
Margate
North Foreland
Broadstairs
Ramsgate
Eastchurch
Whitstable
Sittingbourne
Sturry
Ash
Sandwich
Deal
Canterbury
Alyesham
Kent Downs
The Downs
South Foreland
Dover
Folkestone
Hythe
Dymchurch
New Romney
Lydd
Dungeness
Rochester
Chatham
Maidstone
Bearsted
Charing
Ashford
Hawkinge
Headcorn
Staplehurst
Royal Tunbridge Wells
Tenterden
Hawkhurst
Hamstreet
Northiam
Rye
Winchelsea
Hastings
Bexhill
Battle
Heathfield
Crowborough
Tonbridge
Yalding
Sevenoaks
Orpington
Croydon
Biggin Hill
Caterham
Redhill
Reigate
Dorking
Leatherhead
Esher
Sutton
Richmond
Heathrow
Staines-upon-Thames
Bracknell
Woking
Farnborough
Guildford
Godalming
Surrey Hills
Gatwick
Crawley
Horsham
East Grinstead
Haslemere
Liphook
Billingshurst
Pulborough
Midhurst
SOUTH DOWNS
Southwater
Haywards Heath
Uckfield
Burgess Hill
Ashington
Steyning
Storrington
Worthing
Arundel
Chichester
Littlehampton
Bognor Regis
Brighton
Lewes
Newhaven
Polegate
Eastbourne
Beachy Head
Selsey
Selsey Bill
Legend
Site location
EIA Scoping Report
Site Location Plan - Regional
Client / Project:
London Paramount Entertainment Resort
London Resort Company Holdings
Scale: 1:450,000 @A3
07 November 2014
0
10,000 m
Drawn by:
JV
Checked by:
PL
Job Ref:
Fig. 1.1
Contains Ordnance Survey data © Crown Copyright and database right 2014

# London Paramount Entertainment Resort

## Statement of Community Consultation (SOCC)

London Resort Company Holdings

April 2015

# Contents


1. Introduction ..... 1
2. About LRCH and the London Paramount Entertainment Resort ..... 1
3. Project description ..... 1
4. Project benefits and impacts ..... 3
5. Proposed development area of the Project ..... 5
6. Nationally Significant Infrastructure Projects (NSIPs) – consenting process ..... 5
7. Environmental Impact Assessment development ..... 6
8. Earlier stages of pre-application consultation ..... 6
9. Forthcoming public consultation ..... 7
10. Media and advertising ..... 14
11. Other consultations ..... 15
12. How to contact us ..... 16

Appendix 1 ..... 17

Appendix 2 ..... 21


**For further information contact:**


**Email:** consultation@londonparamount.info
**Tel:** 0800 008 6765 (Monday – Friday, 9am – 5.30pm)
**Post:** FREEPOST ref: RTRB-LUUJ-AGBY, London Paramount c/o PPS Group, Sky Light Tower, 50 Basinghall Street, London, EC2V 5DE
**Web:** www.londonparamount.info

## 1. Introduction

1.1 This Statement of Community Consultation (SOCC) sets out how London Resort Company Holdings Limited (LRCH) intends to consult the community on its proposed application for development consent to authorise the London Paramount Entertainment Resort. A copy of the SOCC is available on the London Paramount consultation website: **www.londonparamount.info**

## 2. About LRCH and the London Paramount Entertainment Resort

2.1 LRCH is the company promoting the London Paramount Entertainment Resort and has assembled an expert team of consultants to support it in its preparation of a draft Development Consent Order (DCO) for submission to the Planning Inspectorate, who will assess the proposal before making a recommendation to the Secretary of State for Communities and Local Government. The proposal is designated by the Secretary of State as a Nationally Significant Infrastructure Project (NSIP) which is why the DCO route is being pursued (further details in section 6).

2.2 LRCH is proposing to develop a world class Entertainment Resort on the Swanscombe Peninsula, known as London Paramount Entertainment Resort (the Resort, or the Project). The Project is an important element of the wider development proposals for the Thames Gateway and north Kent, including the proposed Garden City at Ebbsfleet which will be brought forward by the Ebbsfleet Development Corporation (EDC).

## 3. Project description

3.1 The overall site including the access corridor to the A2, totalling approximately 537 hectares (1,327 acres), is principally based on the Swanscombe Peninsula on land to the east of Ingress Park, Greenhithe, between the A226 and the River Thames. The proposed site offers superb direct access to London and its transport hubs further linking Swanscombe to the rest of the country and Europe.

3.2 The key elements of the proposed Entertainment Resort are identified and explained below, along with the infrastructure improvements that are proposed to serve the proposed development. The NSIP definition means the proposal is described as “principal” and “associated” development though these are to be considered together to understand the overall content of the scheme.

*Principal development:*

- A core leisure 'resort' up to approximately 50 hectares in area (125 acres), featuring a range of rides, attractions, cinemas, theatres, night clubs, food and beverage facilities, retail and amenity facilities themed around the films and television programmes of Paramount Studios and UK producers;

- Up to 2,500 hotel rooms as a part of a total provision of up to 5,000 hotel bedrooms across the Resort development as a whole;

- Back of house / service facilities; and

- Water features including ponds and canals.

*Associated development:*

- A visitor entrance square with ancillary commercial uses;

- A range of hotels with a combined total of up to 3,500 bedrooms as a part of a total provision of up to 5,000 hotel bedrooms across the Resort development as a whole;

- Staff training facilities;

- A creative business hub facility;

- Potential for up to 30,000 square metres (gross) (m2) of event space for conferences and trade shows, with the potential to host music and sporting events;

- A water park;

- Enhancements to river access beside the River Thames;

- Up to 14,000 car parking spaces for both visitor and staff use, located partly in multi-storey facilities, and bus and coach parking;

- Improvements to transport infrastructure including a new dual carriageway between the core resort area and the A2(T) / B259 junction, and cycling and pedestrian infrastructure;

- A new junction from the A2 serving the resort;

- Flood prevention works on parts of the site;

- Landscape works throughout the development, incorporating earth shaping, new planting and habitat creation; and

- Provision of service infrastructure including water, electricity and gas supplies, telecommunications and arrangements for wastewater treatment and disposal.

**Figure 1** - Showing an illustration of what the proposed entertainment resort may look like. Design elements of the scheme will be consulted on where practically possible.

3.3 Project information may continue to be updated until Friday 8 May 2015 and you are therefore advised to check the website www.londonparamount.info and deposit locations for such updates.

## 4. Project benefits and impacts

4.1 *Potential benefits of the Project*

- Catalyst for other development in the region including the Garden City;

- The Project will bring multi-billion pound investment and benefits to the economies of Dartford, Gravesham, Kent and the UK generally;

- It is currently estimated that the Project will create thousands of new jobs once operational. These jobs would typically be skilled or semi-skilled jobs and will primarily be delivered through engagement with the outside education community as well as some in-house training. In addition to direct jobs, there will be a creative

business hub on site and there will be thousands of supplier jobs created in the wider economy as a result of this and the wider Resort;

- There will also be significant job creation associated with construction activity which is expected to last around three years;

- Improvements will be made to the roads, ensuring that new infrastructure is in place to serve the Resort including a new dedicated access route;

- The Project will regenerate a brownfield site, isolated by its previous industrial uses, back into a vibrant focus for the region;

- New routes will be created to make it attractive for people to walk, cycle or bus to the site; and

- There will be increased economic activity in the local area, leading to an associated increase in local spend.

4.2 *Potential impacts of the Project*

However, the above benefits cannot be achieved without some impact. These impacts are linked to the construction and operation of the proposed Project. The impacts potentially include:

- An increase in traffic movements on the A2;

- Views of the area – from north Kent and south Essex;

- Temporary local disturbance during the use of the existing pier for construction materials and river access; and

- Temporary local effects (e.g. dust, noise and traffic disturbance) during construction work.

- Noise and light disturbance during operation

- Socio-economic impact

A full list of the potential effects is contained in the Preliminary Environmental Information Report (PEIR), which provides a description of the environmental assessment information that has been gathered to date. LRCH will be seeking the views of individuals and organisations on the PEIR as part of the consultation described in this SOCC.

## 5. Proposed development area of the Project

5.1 The red line on the plan below indicates the likely boundary of the area that will be included in the DCO application. This includes important highway improvements works on the A2.

**Figure 2:** The red line on the image above shows the likely draft DCO red line boundary

## 6. Nationally Significant Infrastructure Projects (NSIPs) – consenting process

6.1 LRCH intends to apply to the Planning Inspectorate for a DCO under the requirements of the Planning Act 2008 (the Act).

6.2 The Project was directed by the Secretary of State for Communities and Local Government as a nationally significant infrastructure project (NSIP) on 9 May 2014 following a request from LRCH. The Act sets out the legal planning process for NSIPs. The Project is the first "Business or Commercial Project" to qualify as an NSIP and therefore to use the Act.

6.3 Under the NSIP planning regime, LRCH is required to submit a draft DCO to the Planning Inspectorate, a specialist executive agency acting on behalf of the Secretary of State for Communities and Local Government, rather than the Local Planning Authorities for the area in which the development is located.

6.4 The following extract from the National Infrastructure Directorate website (http://infrastructure.planningportal.gov.uk/) explains the examination process in more detail:

*The Planning Inspectorate has six months to carry out the examination. During this stage, people who have registered to have their say, are invited to provide more details of their views in writing. Careful consideration is given by the Examining Authority to all the important and relevant matters, including the representations of all interested parties, any evidence submitted and answers provided to questions set out in writing and explained at hearings.*

6.6 Once the application has been examined, the Planning Inspectorate's appointed examiners will make a recommendation to the Secretary of State for Communities and Local Government who then decides whether or not the proposed Project can proceed. LRCH currently anticipates that a DCO application for the Project will be submitted in summer / autumn 2015.

6.7 More details regarding the NSIP planning process are available from the Planning Inspectorate itself at infrastructure.independent.gov.uk or telephone 0303 444 5000.

## 7. Environmental Impact Assessment development

7.1 The Project constitutes an Environmental Impact Assessment (EIA) Development and requires an EIA to be undertaken in accordance with the Infrastructure Planning (EIA Assessment) Regulations 2009. The results of this assessment will be reported within the Environmental Statement (ES) which will accompany LRCH's DCO application to the Planning Inspectorate. The EIA process ensures that the likely significant environmental effects of the Project are identified, assessed and managed.

7.2 Once the ES supporting the application has been finalised it will be made available on the Project website (www.londonparamount.info) and will be submitted within the application for a DCO.

## 8. Earlier stages of pre-application consultation

8.1 LRCH recognises the importance of consulting with local communities and the benefit of early consultation with all stakeholders. Early engagement with those located in the vicinity of the site provides local insight on what the impact of the proposals could be

and what mitigation measures could be put in place. LRCH asked the relevant local authorities, Gravesham Borough Council, Dartford Borough Council and Kent County Council, to assist it in how best to consult with local people. Following initial discussions with the Planning Inspectorate and the local authorities a four stage consultation process was proposed as follows:

| Stage | Activity | Date |
|---|---|---|
| **STAGE 1** | Non-statutory consultation with community and stakeholders on methods of consultation | July 2014 |
| **STAGE 2** | Non-statutory consultation on emerging proposals | November 2014 |
| **STAGE 3** | Non-statutory themed workshops on specific areas of interest | February-March 2015 |
| **SOCC sent to Local Authorities for statutory consultation** | | **Feb 2015** |
| **STAGE 4** | Statutory community and stakeholder consultation on proposed application for DCO. | April-June 2015 |

8.2 While there is a formal difference between statutory and non-statutory consultation, LRCH is using the non-statutory consultation stages to ensure that feedback gained from Stages 1 to 3 fully inform the proposals before the statutory stage of engagement in April-June 2015.

8.3 The consultation outlined in the SOCC forms Stage 4 of LRCH's approach. It therefore builds on previous stages of consultation set out above.

8.4 Following each consultation stage, LRCH has analysed and carefully considered all of the representations received. The response to representations and their influence on the proposed Project is documented within the 'Feedback Reports' that have accompanied each stage of consultation. The feedback reports are available to download on the project website http://londonparamount.info/downloads/.

## 9. Forthcoming public consultation

9.1 During April-June 2015 LRCH will undertake consultation on its proposed application. This consultation will be undertaken in accordance with section 47 of the Planning Act 2008. This section of the SOCC sets out how LRCH intend to carry out this consultation and the opportunities that will be made available for people to share their views on the proposals.

9.2 ***When will LRCH consult?***

LRCH will consult from 27th April to 5th June 2015. Responses to the consultation will need to be sent to LRCH by 5th June 2015 to be taken into account. Please quote "London Paramount Entertainment Resort Order" in any correspondence.

9.3 ***What will LRCH consult on?***

LRCH will consult on the proposed development for which it currently intends to apply for development consent. LRCH will provide a Community Consultation Document, setting out a non-technical overview of the project including Preliminary Environmental Information, on which we are seeking your views. A consultation questionnaire will accompany the Community Consultation Document and this will invite the public to comment on a range of issues and help shape particular elements of the project.

9.4 In addition, the following technical documents will also be made available (as required for the statutory phase):

- The Draft DCO and explanatory memorandum;
- Technical draft plans and drawings; and
- The Preliminary Environmental Information Report (PEIR).

9.5 ***How will LRCH consult on the preliminary environmental information?***

LRCH have collected a large amount of information about the environmental effects of the proposals. This information will be presented in a PEIR which will be made available during the consultation. LRCH will present its assessment of the nature and extent of the Project's potential effects and will seek views on its proposals to manage and mitigate against those impacts.

*9.6* ***How will LRCH consult local people?***

The consultation will take place over a six-week period commencing on 27th April 2015 and will consist of a number of public consultation events in multiple venues across Dartford and Gravesham as well as ongoing engagement with local stakeholders.

9.7 The tables below outline the activities that will be carried out as part of the consultation on the Project.

9.8 *Public consultation events*

| Consultation activity | What's involved? |
|---|---|
| **Public consultation events**<br><br>10 public consultation events in April and May 2015 will allow the local community to view the proposals, talk with representatives from the Project team and provide written feedback.<br><br>The public consultation events will be advertised on the London Paramount webpages (www.londonparamount.info), on the London Paramount Facebook page (www.facebook.com/londonparamount) and Twitter page (twitter.com/paramountresort), and in a leaflet distributed to homes and businesses across Dartford and Gravesham.<br><br>Advertisements for the consultation events will appear in the following newspapers:<br>• Kent Messenger<br>• North Kent News Shopper<br>• Gravesend Reporter<br>• Kent on Sunday<br>• Thurrock Gazette<br>• Essex Enquirer<br><br>The SOCC notice will appear in the same newspapers as above. Editorial coverage will also be sought in all the above papers and others across the region.<br><br>Posters advertising the public consultation events will be sent to all parish councils in Kent, Dartford and Gravesham for inclusion on parish notice boards. | The public consultation events will be held in suitable, accessible locations in Dartford and Gravesham.<br><br>Materials will include display panels and plans to clearly explain the proposals. The London Paramount Community Consultation Document will be available, together with copies of Project plans and the Preliminary Environmental Information Report.<br><br>Feedback forms will also be provided and attendees will be able to fill them out at the events or send their responses at a later date to the consultation freepost address or online (see below for contact details).<br><br>The public consultation events will be held to include daytimes, evenings and weekend(s). Locations and timings for public exhibitions are below:<br>• 29th April, 4pm-8pm – Gravesend Old Town Hall, Gravesham<br>• 30th April, 10am-9pm – Bluewater, Dartford<br>• 1st May, 4.30pm-8.30pm – British Legion Greenhithe, Dartford<br>• 5th May,4pm-8pm – Princes Park Stadium, Dartford<br>• 8th May , 11am-3pm– St Botolph's Church Hall, Gravesham<br>• 9th May, 2pm-5pm – Swanscombe Leisure Centre, Dartford<br>• 11th May, 3.30pm-7.30pm – Dartford Council Chambers, Dartford |

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|---|---|
| | • 12th May, 4.30pm-8.30pm – Northfleet School for Girls, Gravesham<br>• 13th May, 4pm-8pm – Eastgate, Gravesham<br>• 14th May, 3.30pm-7.30pm – Gravesham Civic Centre, Gravesham |

9.9 *Additional consultation methods*

| Consultation activity | What's involved? |
|---|---|
| **Online**<br><br>A Project website will provide information about the proposals, downloadable copies of all documents and consultation materials, and enable online feedback.<br><br>The London Paramount Facebook page (www.facebook.com/londonparamount) and Twitter page (twitter.com/paramountresort) will also promote ways of accessing the Project documents and providing feedback. | This will be built into the existing Project website: www.londonparamount.info<br><br>The website will be regularly updated throughout the pre-application process and will include copies of the preliminary environmental information, the Community Consultation Document and other key documents. |
| **Post, email and telephone**<br><br>A dedicated Project Freepost address, email address and telephone number will enable people to contact the Project team with enquiries and/or feedback.<br><br>These contact details will be publicised as part of the publicity activity outlined in this SOCC. | The Freepost address will be:<br>London Paramount, ref: RTRB-LUUJ-AGBY, c/o PPS Group, Sky Light Tower, 50 Basinghall Street, London, EC2V 5DE<br><br>The email address will be:<br>consultation@londonparamount.info<br><br>The community helpline number will be:<br>0800 008 6765<br><br>This will be staffed Monday to Friday, 9am – 5.30pm, with an answer phone system for out of hours calls. |
| **Seldom heard groups** | As part of the consultation strategy process |

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|---|---|
| | the Project team will include ways to engage with seldom heard groups during the consultation, as identified and suggested by the relevant local authorities. Engagement activities include holding events for students in local secondary schools in Dartford and Gravesham. |

9.10 *Accessing key documents*

| Consultation activity | What's involved? |
|---|---|
| **Inspection copies of key documents**<br><br>The Community Consultation Document and Preliminary Environmental Information Report (PEIR) will be available in public buildings in Dartford, Gravesham and other locations in Kent.<br><br>These documents will also be made available on the Project website. People can also request paper (at a charge) or CD copies by emailing consultation@londonparamount.info or by calling the community line on 0800 008 6765.<br><br>People can request copies of the documents in large print and other languages.<br><br>A link to the Community Consultation Document and Preliminary Environmental Information Report will also be sent electronically to registered contacts and key local stakeholders.<br><br>Additional Project documentation will be available on the Project website. This includes the following:<br>• Draft Development Consent Order<br>• Statement of Community Consultation (SOCC) | A feedback form will accompany the Community Consultation Document and this will invite the public to comment on a range of issues and help shape particular elements of the Project.<br><br>A list of the public buildings (such as libraries and council buildings) and opening times where the Community Consultation Document and Preliminary Environmental Information Report will be made available can be found in Appendix 1.<br><br>If the public buildings are unable to hold these consultation documents, notices will be displayed where possible informing people of how to access them. |

| | |
|---|---|
| • Detailed plans and drawings<br>• Preliminary Environment Information Report | |

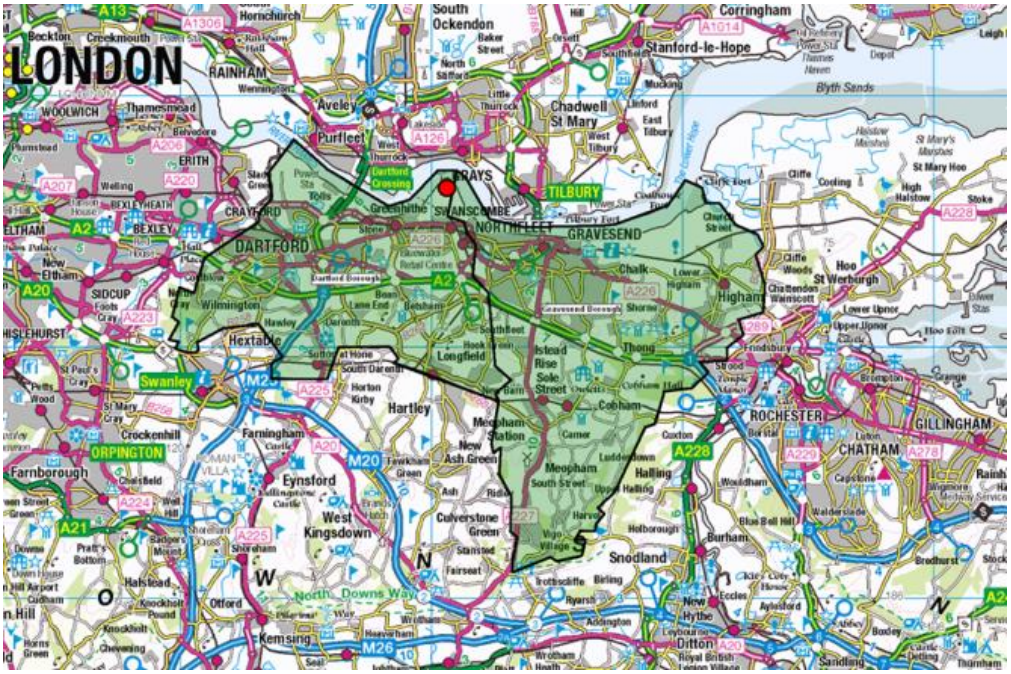
9.11 ***Who will LRCH consult with?***

For the purposes of this consultation the 'community' is taken to mean those people who live or work in the vicinity of the Project, and users or visitors to the area who may be directly or indirectly affected by the Project. However, all consultation responses will be taken into account, whether from people living in the immediate vicinity of the site or from those living outside the area.

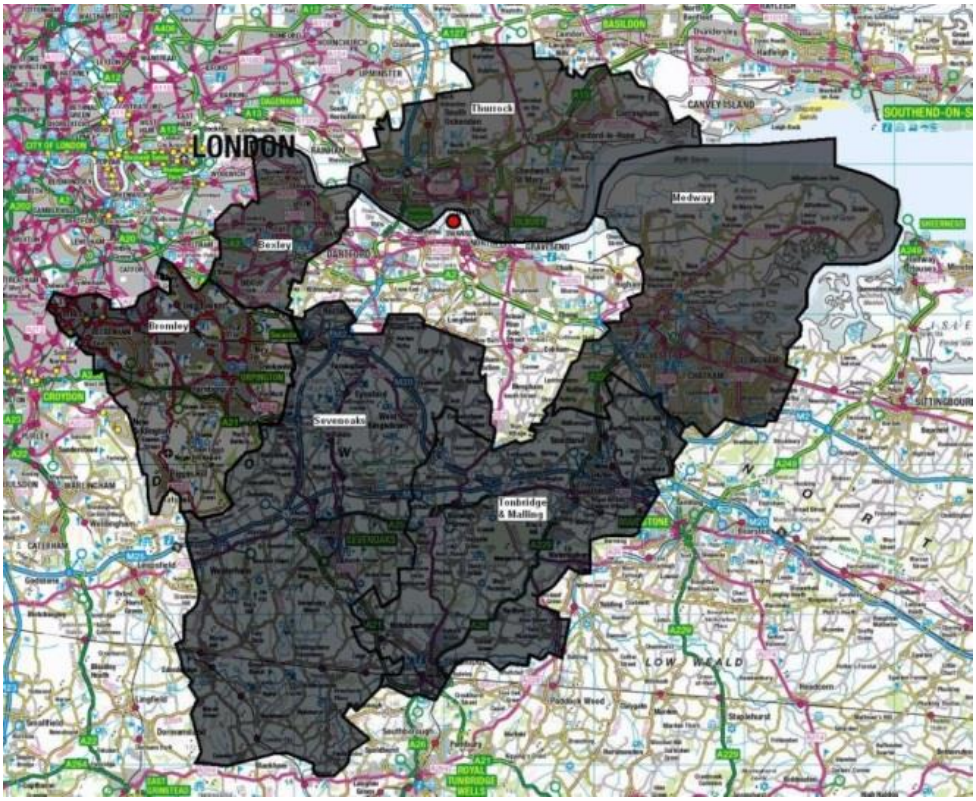
9.12 For the purposes of public consultation, LRCH has defined three zones for consultation and engagement and a proposed approach for each in agreement with local authorities. These are shown in the table below:

| **Consultation Zones** | | |
|---|---|---|
| Zone | Area Selected | Method of advertising consultation/ proposals |
| Zone 1 | Residents, businesses and members of Dartford Borough Council and Gravesham Borough Council | • Letters to all residents and businesses in the vicinity of the Project<br>• Letters to all elected council members<br>• Statutory notice requirements & advertisements placed in local newspapers<br>• Project website and dedicated social media<br>• Local posters<br>• Project documentation made available in agreed public buildings |
| Zone 2 | Neighbouring local authorities | • Letters to all elected members and chief executive of authority<br>• Letters to all parish councils within the administrative boundaries<br>• Project website and dedicated social media |
| Zone 3 | County level administrative boundaries | • Letters to all elected members and chief executive of authority<br>• Project website and dedicated social media |

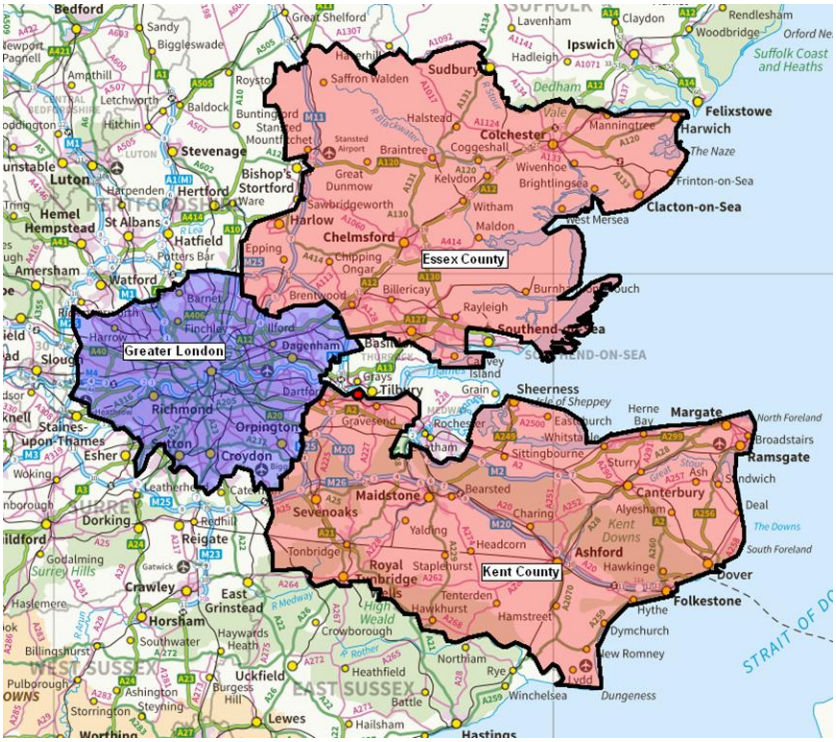
**Zone 1 – Dartford Borough Council and Gravesham Borough Council**




**Zone 2 – Neighbouring local authorities**



**Zone 3 – County level administrative boundaries**




9.13 In addition to consulting the three zones, as set out above, individuals who have attended previous stages of consultation or registered an interest via the website will receive correspondence on the project.

## 10. Media and advertising

| Consultation activity | What's involved? |
|---|---|
| **Media**<br><br>Proactive media engagement to raise awareness of the Project and public consultation in the local area. | Building on our early engagement with the local media since the launch of the Project in May 2014, LRCH will provide press releases and briefings to the local media to facilitate editorial coverage and to raise awareness of the proposals and consultation process. |

| | |
|---|---|
| **Advertising SOCC**<br><br>As per the requirements of the Act, notification of this SOCC will be published in local newspapers. | A notice of this SOCC will be published in the following local and regional papers:<br>• Kent Messenger (including Kent Online)<br>• North Kent News Shopper<br>• Gravesend Reporter<br>• Kent on Sunday<br>• Essex Enquirer<br>• Thurrock Gazette<br><br>Editorial coverage will also be sought in all of these newspapers, including others across the region, regarding the consultation process. |

## 11. Other consultations

While consulting with the public, LRCH will also be consulting with the statutory consultees identified in section 42 of the Act. This includes:

- Local authorities with jurisdictions covering the proposed development area (specifically Dartford Borough Council, Gravesham Borough Council and Kent County Council; and the emerging Ebbsfleet Development Corporation);
- Statutory bodies (such as Natural England and the Environment Agency);
- Local parish and town councils (a list of the parish and town councils LRCH will consult can be found at Appendix 2); and
- People with an interest in land potentially affected by the proposals.

In addition, LRCH are aware that other organisations are likely to be carrying out public consultation activities on their projects and make demands on the time of the public and their representatives. LRCH will try to ensure that the timing of our consultation has due regard to other consultations taking place in the locality.

It is anticipated that the following consultations will be provided by local authorities during the London Paramount consultation:

<u>Dartford Borough Council</u>

• Stone Neighbourhood Plan consultation

• Development Policies plan pre-submission consultation

Gravesham Borough Council

- Housing strategy priorities and actions consultation
- Draft empty property strategy consultation
- Parish housing needs surveys

Kent County Council

- Customer Service Policy, Voluntary and Community Sector Policy
- Post 16 Transport Policy for 2015/16

In addition there is potential for the Ebbsfleet Development Corporation to be consulting on the vision and / or preliminary ideas for a masterplan for the Garden City.

## 12. How to contact us

12.1 There are a number of ways you can find out more about the Project and pre-application consultation process, and register your views:

**Email:** consultation@londonparamount.info

**Telephone:** 0800 008 6765 (Monday – Friday, 9am – 5.30pm)

**Post:** FREEPOST ref: RTRB-LUUJ-AGBY, London Paramount c/o PPS Group, Sky Light Tower, 50 Basinghall Street, London, EC2V 5DE

**Web:** www.londonparamount.info

**Appendix 1**

**Locations to inspect copies of consultation documents**

LRCH will place the following documents in hard copy at the locations listed below:
1) This SOCC (from 13th April until 5th June 2015); and
2) The Project documentation (from 27th April until 5th June 2015).

| Venue | Opening hours |
|---|---|
| Dartford | |
| Dartford Council Offices, Civic Centre, Home Gardens, Dartford, Kent, DA1 1DR | Monday 8:45am-5:15pm<br>Tuesday 8:45am-5:15pm<br>Wednesday 8:45am-5:15pm<br>Thursday 8:45am-5:15pm<br>Friday 8:45am-4:45pm |
| Swanscombe and Greenhithe Town Council, Council Offices, The Grove, Kent, DA10 0GA | Monday 9:30am-1pm, 1:45pm-4pm<br>Tuesday 9:30am-1pm, 1:45pm-4pm<br>Thursday 9:30am-1pm, 1:45pm-4pm<br>Friday 9:30am-1pm, 1:45pm-4pm |
| Community Café, Old Fire Station Café Church Road, Swanscombe, DA10 0HF | Monday to Friday 10am-2pm |
| Greenhithe Library, London Road, Greenhithe, Kent, DA9 9EJ | Tuesday 1pm-5:30pm<br>Thursday 1pm-5:30pm<br>Saturday 9:30am-12:30pm |
| Swan Valley Library, Swanscombe Library Discovery Centre, Ebbsfleet Academy, Southfleet Road, Swanscombe, Kent, DA10 0BZ | Monday 10am-2pm<br>Tuesday 10am-2pm<br>Wednesday 1pm-5pm<br>Friday 1pm-5pm<br>Saturday 10am-2pm |
| Longfield Library, 49 Main Road, Longfield, Kent, DA3 7QT | Tuesday 1pm-6pm<br>Wednesday 9am-1pm<br>Thursday 9am-1pm<br>Friday 1pm-6pm<br>Saturday 10am-2pm |
| Dartford Library, Central Park, Market Street, Dartford, Kent, DA1 1EU | Monday 8:30am- 6pm<br>Tuesday 8:30am-6pm<br>Wednesday 8:30am-6pm<br>Thursday 8:30am-6pm<br>Friday 8:30am-6pm<br>Saturday 9am-5pm |
| Temple Hill Library, Temple Hill Square, Dartford, Kent, DA1 5HY | Monday 9am-6pm<br>Tuesday 9am-6pm |

| | |
|---|---|
| | Thursday 9am-6pm<br>Friday 9am-6pm<br>Saturday 10am-2pm |
| Ashen Drive Library, Ashen Drive, Dartford, Kent, DA1 3LY | Monday 2pm-6pm<br>Tuesday 9am-1pm<br>Thursday 2pm-6pm<br>Friday 9am-1pm<br>Saturday 10am-12pm |
| Fleetdown Library, Swaledale Road, Dartford, Kent, DA2 6JZ | Tuesday 9:30am-5:30pm<br>Wednesday 1:30pm-5:30pm<br>Thursday 9:30am-5:30pm<br>Friday 9:30am-5:30pm<br>Saturday 10am-12pm |
| Sutton-at-Hone Library, Main Road, Sutton-At-Hone, Dartford, Kent, DA4 9HQ | Monday 10am-6pm<br>Tuesday 10am-2pm<br>Friday 10am-6pm<br>Saturday 10am-2pm |
| Summerhouse Drive Library, 80 Summerhouse, Bexley, Kent, DA6 2EE | Tuesday 9am-6pm<br>Thursday 9am-6pm<br>Friday 2pm-6pm<br>Saturday 10am-2pm |
| Gravesham | |
| Gravesham Borough Council, Civic Centre, Windmill Street, Gravesend, Kent, DA12 1AU | Monday to Friday 9am-5pm |
| Coldharbour Library, Coldharbour Road, Northfleet, Gravesend, Kent, DA11 8AE | Monday 9am-6pm<br>Tuesday 9am-8pm<br>Wednesday 9am-6pm<br>Thursday 9am-6pm<br>Friday 9am-6pm<br>Saturday 9am-5pm |
| Gravesend Library, Windmill Street, Gravesend, Kent, DA12 1BE | Monday 9am-6pm<br>Tuesday 9am-6pm<br>Wednesday 9am-6pm<br>Thursday 9am-6pm<br>Friday 9am-6pm<br>Saturday 9am-5pm |
| Dashwood Library, Dashwood Road, Northfleet, Gravesend, DA11 7LY | Monday 9:30am-1pm, 2pm-5pm<br>Tuesday 2pm-5pm<br>Friday 9:30am-1pm, 2pm-5pm<br>Saturday 2pm-5pm |
| Higham Library, Villa Road, Higham, | Monday 9am-1pm |

| | |
|---|---|
| Rochester, Kent, ME3 7BS | Tuesday 2pm-5:30pm<br>Wednesday 9am-1pm<br>Thursday 2pm-5:30pm<br>Friday 9am-1pm<br>Saturday 10am-2pm |
| Hive House Library, Hive House 10-11, The Hive, Northfleet, Gravesend, Kent, DA11 9DE | Monday 9am-12:30pm<br>Tuesday 9am-12:30pm<br>Thursday 2pm-5pm<br>Friday 2pm-5pm<br>Saturday 10am-2pm |
| King's Farm Library, Sun Lane, Gravesend, Kent, DA12 5HR | Monday 9am-5pm<br>Tuesday 9am-5pm<br>Wednesday 9am-5pm<br>Friday 9am-5pm<br>Saturday 10am-2pm |
| Marling Cross Library, 266 Mackenzie Way, Gravesend, Kent, DA12 5TY | Tuesday 9:30am-1pm, 2pm-5pm<br>Thursday 9:30am-1pm<br>Friday 2pm-5pm<br>Saturday 2pm-4pm |
| Meopham Library, Wrotham Road, Meopham, Gravesend, Kent, DA13 0AH | Monday 9am-6pm<br>Tuesday 9am-6pm<br>Thursday 9am-6pm<br>Friday 9am-6pm<br>Saturday 9am-1pm |
| Riverview Park Library, The Alma, Leander Drive, Gravesend, Kent, DA12 4NG | Monday 9am-6pm<br>Tuesday 9am-6pm<br>Wednesday 9am-6pm<br>Friday 9am-6pm<br>Saturday 10am-2pm |
| Vigo Library, Village Hall, The Bay, Vigo, Gravesend, Kent, DA13 0TD | Tuesday 11am-1pm, 2pm-5pm<br>Saturday 9:30am-2:30pm |
| Kent (Maidstone) | |
| Kent County Council, County Hall, Sessions House, Maidstone, Kent, ME14 1XQ | Monday to Friday 9am-5pm |
| Maidstone Library, Kent History and Library Centre, James Whatman Way, Maidstone, Kent, ME14 1LQ | Monday 9am-6pm<br>Tuesday 9am-6pm<br>Wednesday 9am-6pm<br>Thursday 9am-8pm<br>Friday 9am-6pm<br>Saturday 9am-5pm |
| Sevenoaks | |
| Sevenoaks Library | Monday 9am-6pm |

| | |
|---|---|
| Buckhurst Lane<br>Sevenoaks<br>Kent<br>TN13 1LQ | Tuesday 9am-6pm<br>Wednesday 9am-6pm<br>Thursday 9am-8pm<br>Friday 9am-6pm<br>Saturday 9am-5pm |
| Tonbridge & Malling | |
| Tonbridge Library<br>1 Avebury Avenue<br>Tonbridge<br>Kent<br>TN9 1TG | Monday 9am-6pm<br>Tuesday 9am-6pm<br>Wednesday 9am-6pm<br>Thursday 9am-8pm<br>Friday 9am-6pm<br>Saturday 9am-5pm |
| Thurrock | |
| Grays Central Library<br>Thameside Complex<br>Orsett Road,<br>Grays<br>Essex<br>RM17 5DX | Monday 10am-7pm<br>Tuesday 10am-7pm<br>Wednesday 10am-7pm<br>Thursday 10am-7pm<br>Friday 10am-5pm<br>Saturday 10am-5pm |
| London Borough of Bexley | |
| Central Library<br>Townley Road<br>Bexleyheath<br>DA6 7HJ | Monday 10am-5.30pm<br>Tuesday 10am-5.30pm<br>Wednesday 10am-5.30pm<br>Thursday 10am-7pm<br>Friday 10am-1pm<br>Saturday 1pm-5pm<br>Sunday 10am-1pm |
| London Borough of Bromley | |
| Central Library<br>High Street<br>Bromley<br>BR1 1EX | Monday 9.30am-6pm<br>Tuesday 9.30am-6pm<br>Wednesday 9.30am-6pm<br>Thursday 9.30am-8pm<br>Friday 9.30am-6pm<br>Saturday 9.30am-5pm |
| Medway | |
| Chatham Library<br>Dock Road<br>Chatham<br>ME4 4TX | Monday 9am-6pm<br>Tuesday 10am-7pm<br>Wednesday 9am-6pm<br>Thursday 9am-7pm<br>Friday 9am-6pm<br>Saturday 9am-5pm |

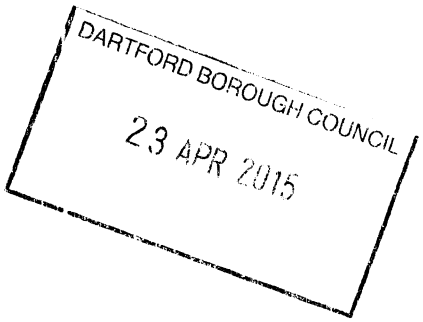
**Appendix 2**

**Local parish and town councils that LRCH will consult:**

| Dartford |
| --- |
| Bean Parish Council |
| Darenth Parish Council |
| Longfield and New Barn Parish Council |
| Southfleet Parish Council |
| Stone Parish Council |
| Sutton-At-Hone and Hawley Parish Council |
| Swanscombe & Greenhithe Town Council |
| Wilmington Parish Council |

| Gravesham |
| --- |
| Cobham Parish Council |
| Higham Parish Council |
| Luddesdown Parish Council |
| Meopham Parish Council |
| Shorne Parish Council |
| Vigo Parish Council |

Sonia Bunn
Senior Planner (Major Projects)
Dartford Borough Council
Civic Centre
Home Gardens
Dartford, Kent
DA1 1DR




22nd April 2015

Dear Sonia,

London Paramount Entertainment Resort – Draft Statement of Community Consultation

Thank you for your letter dated 27th March 2015 containing the Dartford Borough Council's comments on our Statement of Community Consultation (SoCC). Your letter stated that overall the Council believes that LRCH are undertaking a comprehensive approach to consulting the local community and supports the approach set out in the SoCC.

A number of suggestions were put forward and we have incorporated these as set out below:

- The Council recommended that in addition to the depository locations outlined in the draft SoCC that the consultation material is made available in public buildings across Kent rather than only in Dartford, Gravesham and Kent. We have responded to this by including town centre venues in the neighbouring local authorities of Bexley, Bromley, Sevenoaks, Tonbridge & Malling, Medway and Thurrock.

- The Council expressed concern over absence of the availability of the consultation documents within Southfleet and Bean, we had already made contact with the Clerks of both Southfleet Parish Council and Bean Parish Council and they had advised that there was no suitable public locations in these areas in which to deposit the consultation documents for viewing.

- Following the Council's suggestion, we have included a reference in the SoCC to the possibility of the Ebbsfleet Development Corporation consulting on the masterplan for the Garden City in the 'other consultations' section of the SoCC.

We trust the above comments address your letter adequately. We enclose a copy of the SoCC, which is now available on our website (www.londonparamount.info) and also at the depository locations.

Yours Sincerely

Fenlon Dunphy & David Testa
London Paramount

The Planning Inspectorate

3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol, BS1 6PN

Customer Services: 0303 444 5000
e-mail: environmentalservices@infrastructure.gsi.gov.uk

Sent by Email

Your Ref:

Our Ref: BC080001

Date: 11 November 2014

Dear Sir/Madam

**Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended) – Regulations 8 and 9**

**Application by for an Order Granting Development Consent for the London Paramount Entertainment Resort**

**Scoping consultation and notification of the applicant's contact details and duty to make available information to the applicant if requested**

The applicant has asked the Secretary of State for its opinion (a scoping opinion) as to the information to be provided in an environmental statement relating to the project. You can access the request and the report from the National Infrastructure pages of the Planning Portal: www.planningportal.gov.uk/infrastructure. Alternatively, you can use the following direct link: http://infrastructure.planningportal.gov.uk/Document/2814308

The Secretary of State has identified you as a consultation body which must be consulted by the Secretary of State before adopting its scoping opinion. The Secretary of State would be grateful therefore if you would:

- inform the Secretary of State of the information you consider should be provided in the environmental statement, or
- confirm that you do not have any comments.

If you consider that you are not a consultation body as defined in the EIA Regulations please let us know.

The Secretary of State is entitled to assume under Regulation 8(11) that you do not have any comments to make on the information to be provided in the environmental statement, if you have not responded to this letter by 9 December 2014. The deadline for consultation responses is a statutory requirement and cannot be extended.

Responses received after this deadline will not be included within the scoping opinion but will be forwarded to the applicant for information.

Responses to the Secretary of State regarding the scoping report should be sent preferably electronically to environmentalservices@infrastructure.gsi.gov.uk or by post marked for the attention of Will Spencer.

Once complete, you will be able to access the Secretary of State's Scoping Opinion via the Documents tab on the project page of the Planning Portal, available at the following link http://infrastructure.planningportal.gov.uk/.

As the Secretary of State has been notified by the applicant that it intends to prepare an environmental statement, the Secretary of State is also informing you of the applicant's name and address:

Kevin Doyle
London Resort Company Holdings
17 Albemarle Street
London
W1S 4HP

You should also be aware of your duty under Regulation 9(3), if so requested by the applicant, to make available information in your possession which is considered relevant to the preparation of the environmental statement.

If you have any queries, please do not hesitate to contact us.

Yours faithfully

*Will Spencer*

**Will Spencer**
**EIA and Land Rights Advisor**
**on behalf of the Secretary of State**

**April 2015**

**London Paramount Entertainment Resort**

# Preliminary Environmental Information Report Non-Technical Summary

**London Resort Company Holdings Limited**

**Prepared for:**
London Resort Company Holdings Limited
c/o Armila Capital Limited
17 Albemarle Street
London
W1S 4HP

**Prepared by:**
Savills
33 Margaret Street
London
W1G 0JD

# Contents


| | CHAPTER | PAGE |
|---|---|---|
| | | |
| 1. | INTRODUCTION | 5 |
| | | |
| 2. | RELEVANT LAW AND POLICY | 11 |
| | | |
| 3. | PROJECT DESCRIPTION AND DEVELOPMENT OPTIONS | 13 |
| | | |
| 4. | EIA SCOPING AND ENVIRONMENTAL STATEMENT STRUCTURE | 19 |
| | | |
| 5. | LANDSCAPE AND VISUAL EFFECTS | 21 |
| | | |
| 6. | ECOLOGY | 25 |
| | | |
| 7. | WATER RESOURCE MANAGEMENT | 27 |
| | | |
| 8. | SOILS AND GROUND CONDITIONS | 29 |
| | | |
| 9. | TRANSPORT AND ACCESS | 31 |
| | | |
| 10. | AIR QUALITY | 33 |
| | | |
| 11. | NOISE AND VIBRATION | 35 |
| | | |
| 12. | CULTURAL HERITAGE | 37 |
| | | |
| 13. | LAND USE AND SOCIO-ECONOMIC EFFECTS | 39 |
| | | |
| 14. | WASTE | 43 |
| | | |
| 15. | CONCLUSION | 45 |
| | | |
| | | |
| | FIGURES | End |
| | | |
| | Figure 1.1 - Project Site – Regional | |
| | Figure 1.2 - Project Site - Area | |
| | Figure 1.3 - Project Site – Local | |
| | Figure 3.2 - Illustrative master plan | |

# One ◆ Introduction

## OVERVIEW

1.1 The London Paramount Entertainment Resort (the 'Entertainment Resort' or 'the Proposed Development') is conceived as a nationally significant visitor attraction and leisure resort to be located on approximately 545 hectares of predominantly brownfield land between Dartford and Gravesend in north-west Kent (the 'Project Site'). The site is shown in figures 1.1 – 1.3). It includes much of the Swanscombe Peninsula together with an Access Corridor that extends southwards through the Ebbsfleet Valley to the A2(T), and then westwards along the A2(T) as far as the junction with the B255 near Bean.

1.2 London Resort Company Holdings ('LRCH' or the 'Applicant'), has long-term licence agreements with Paramount Pictures Corporation ('Paramount Pictures') and UK producers currently including but not limited to BBC Worldwide ('BBC') and Aardman Animations. These partners wish to see their brands and creations celebrated and developed in a high quality project that adds to their wider appeal and commercial scope.

1.3 The Entertainment Resort is one of the most significant proposals for leisure development ever seen in the United Kingdom - it is unique in concept and scale. It will serve diverse and growing markets for leisure and holidays, conferences, entertainments and the creative arts, and will be a major focus for investment and regeneration in an area that has suffered from the decline of traditional industries.

1.4 With immediate accessibility to national and international rail services at Ebbsfleet International Station and to water-borne transport via the River Thames to central London, the Proposed Development is located to serve customers from throughout the UK, Europe and the rest of the world. An upgraded junction to the A2(T) would provide direct access by road with immediate connection to the M25 and M20 motorways, whilst preventing vehicular access by the local road network.

1.5 The Proposed Development will include a theme park, water park, events spaces for conferences and exhibitions, creative business hub, service buildings and staff training facilities. There will also be up to 5,000 hotel rooms to meet visitors' accommodation needs. The Entertainment Resort will employ around 13,000 people and visitor numbers are anticipated to be in the region of 15 million people per year. Other potential elements of the Proposed Development include an energy centre to provide heat and power.

1.6 The Entertainment Resort represents an investment of approximately £2.4 billion, with significant potential for the local area and South East region to benefit directly and indirectly.

1.7 It is intended that the Proposed Development will commence construction in 2017, with the gates opening to the first customers in 2020, subject to the grant of all necessary consents and approvals.

## GENERAL LOCATION AND EXISTING SITE CHARACTERISTICS

1.8 The Project Site includes a majority of the Swanscombe Peninsula and an Access Corridor running south from to allow access to Ebbsfleet International Station and the A2(T). The Access Corridor extends south of the A2(T) and along the A2(T) to the west to accommodate proposed junction improvements.

1.9 The Swanscombe Peninsula lies 30km south-east of Central London. Four trains per hour link Ebbsfleet International Station to London St Pancras, in Central London, with a journey time of 17 minutes. Trains from Swanscombe station serve Waterloo East and Charing Cross stations in Central London, as well as stations to the south and east of the Project Site.

1.10 The mainly residential settlements of Greenhithe and Swanscombe are in close proximity to the Project Site, with the mixed residential, commercial and industrial areas of Northfleet and Stone lying to the east and west, respectively. The larger town of Gravesend lies approximately 3.5 kilometres to the east.

1.11 The Swanscombe Peninsula is a triangular shaped area of land forming the inside of a large meander in the tidal River Thames east of the Dartford crossings. On the opposite bank of the River Thames are the towns of West Thurrock and Grays in Essex. The river here is navigable by large ocean-going ships. Tilbury Docks, the main ocean-going port for London, is located to the north-east of the Swanscombe Peninsula on the northern bank of the River Thames.

1.12 The A2(T) London to Dover road, which is the M2 motorway for much of its route, runs east-west to the south of the London Paramount site. To its south, land is more open and rural and lies within the Metropolitan Green Belt. The A2(T) meets the M25 London orbital motorway at a point five kilometres south-west of Swanscombe. Further south the M20 motorway that links London to the Channel Tunnel can be reached either a link road from the M2 or via the M25.

1.13 The Bluewater Shopping Centre, on a 97 hectare site, lies 1 km to the north-west of the existing A2(T) = B255 junction near Bean.

1.14 The area including and surrounding the Swanscombe Peninsula has been heavily quarried for chalk, which was used in cement manufacture in London over many decades. The area housed several cement kilns and, consequentially, another characteristic is the presence of significant quantities of cement kiln dust, an inert waste material, discarded at various locations in the local the landscape.

1.15 The majority of the Ebbsfleet / Swanscombe area has been identified for a new Ebbsfleet Garden City, for which the new Ebbsfleet Development Corporation ('EDC') will be the local planning authority.

1.16 The Swanscombe Peninsula within the Project Site has irregular topography, a result of mineral working and the tipping of cement kiln dust. Along the river frontage the ground has been raised to form sea defences approximately 6 metres height above the low tide height. Whereas the land around the edge of the peninsula rises naturally to about 2-3 metres from low tide height, deposits of cement kiln dust has increased this height to an average of around 8.5 - 9 metres with two areas rising to 12 - 13 metres.

1.17 The Project Site includes areas of marshland typical of what might have been seen before industrialisation. In other areas the land is post-industrial in character, having been occupied by industrial buildings or yards. It also includes an abandoned wastewater treatment works.

1.18 Around the shoreline are occasional jetties and inlets used for the mooring of a small number of boats. There are some public footpaths including the Saxon Way, running along the western flood defences.

1.19 The most significant feature on the Project Site is the High Speed 1 (HS1) railway that runs from the Project Site's south-east corner within a cutting and into a tunnel that passes beneath the Project Site and then under the River Thames to the west. Other prominent features include a high voltage electricity line that crosses the Project Site, including a 190 metre high 'super pylon' carrying the cables over the River Thames, and a radar navigation beacon owned by the Port of London Authority, which is located at the northern tip of the peninsula.

## THE DEVELOPMENT CONSENT ORDER PROCESS

1.20 In England, many large and complex projects of national importance are subject to a consenting regime known as the Development Consent Order ('DCO') process. This is akin to the normal planning application process. The process was introduced by the Planning Act 2008. Initially intended for national infrastructure projects such as railways, airports and energy developments, in 2013 the scope of DCOs was expanded to include strategic business and commercial developments such as the Proposed Development, which qualifies as a 'leisure' development.

1.21 The Entertainment Resort is the first such large scale commercial development to go through the DCO process and LRCH has assembled a highly experienced team to promote the Proposed Development through the consenting process.

1.22 In the DCO process, the decision as to whether a project may proceed is ultimately taken by the Government. In the case of the Entertainment Resort this will be the Secretary of

State for the Department of Communities and Local Government ('DCLG'). The work in processing the DCO application on behalf of the Secretary of State is undertaken by a specialist division of the Planning Inspectorate, based in Bristol.

1.23 Professional staff of PINS will process the application. The decision on whether to approve the Proposed Development, and, if so, what requirements will be placed on LRCH, will be based on the recommendations of a panel of independent Inspectors who will be convened by PINS. They will conduct a public examination of the proposals over a period of up to six months, during which the stated positions of any organisation or individual that wishes to be involved in the process will be examined, including at a series of public hearings.

1.24 In the DCO process the onus is on the developer, in this case LRCH, to lead the consultation and assessment processes, such that by the time the examination is convened:

- the project is properly understood and has been publicised widely;
- the effects it might have on local areas and the environment generally have been properly assessed and presented; and
- the views of all concerned have been set out clearly.

1.25 In conducting their examination, the panel of Inspectors will be concerned with understanding fully the views of those who are interested in the project. This will be achieved through a process of written representations and hearing sessions, each open to participation by the general public. The Inspectors will direct questions to participants in the examination, including LRCH and other interested parties.

1.26 Following the examination, the assessors will write a report culminating in a recommendation as to whether the DCO should be made, and hence whether the Proposed Development should be permitted.

1.27 The examination of the Proposed Development is expected to take place in 2016. Importantly, before the examination occurs the developer must make certain that all relevant information has been presented publicly such that anyone who wishes to can comment and that all such comments are received in sufficient time and detail for the Panel to understand them before the examination commences. It is a fundamental characteristic of the process that, during the phases leading up to the examination, the project may be modified so as to improve it or render it acceptable when it would not have been so in its originally proposed form. Experience of major projects indicates that many of the best changes and improvements to a project are the result of comments made by individuals and organisations in response to consultation on the project.

1.28 So that the process works to ensure a rigorous examination, developers are required to go through several steps before submitting their DCO application.

- First, the developer must apply to the Secretary of State to establish whether the project is one for which the DCO process can be used. LRCH received confirmation in May 2014 that the Proposed Development is one that may be consented by a DCO.

- Subsequently, the developer is required to set out and agree how it will undertake public consultation on its proposals and, importantly, how views and information received from such activities will be taken into account in the project. LRCH published a Statement of Community Consultation ('SoCC') in April 2015 to explain how it will do this.

- LRCH has already publicised the project through a series of consultation stages:

  - Stage 1 – July 2014: non-statutory consultation with community and stakeholders on methods of consultation ;

  - Stage 2 – November 2014: non-statutory consultation on emerging proposals;

  - Stage 3 – February-March 2015: non-statutory themed workshops on specific areas of interest.

.

1.29 This document supports the Stage 4 statutory community and stakeholder consultation, taking place during April-June 2015.

1.30 It is proposed that the DCO application for the Proposed Development will be submitted in summer 2015.

## ENVIRONMENTAL INFORMATION AND ENVIRONMENTAL IMPACT ASSESSMENT

1.31 An important requirement of the Development Consent Order ('DCO') process is for the developer to publish and seek comments on a Preliminary Environmental Information Report ('PEIR'). The purpose of the PEIR is to place into the public domain in a structured and logical format a document that examines what the environmental effects of the project might be, and to invite comments on it. It is not intended to be a complete assessment of those effects but should outline the main areas of likely effect and summarise what those effects might be to the best of the knowledge at the time the PEIR is produced. It should stimulate people and organisations to comment and, if possible, clarify which effects may require to be considered.

1.32 In parallel with the DCO process, a separate body of legislation, prepared in accordance with the European Union's Environmental Impact Assessment Directive ('EIA Directive'), requires that projects large or complex enough to have potential significant environmental effects should be subject to Environmental Impact Assessment ('EIA'). EIA has been a key part of the UK's planning systems since 1989 and regulations exist to

ensure that the EIA process is undertaken properly in accordance with the EIA Directive. A set of regulations has been adopted concerning the EIA of DCO projects.

1.33 The Proposed Development requires EIA under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 ('the EIA Regulations'). LRCH has already consulted widely on the 'scope', or coverage, of the EIA it is undertaking and contents of the Environmental Statement ('ES') that will be submitted with the DCO application. The ES will identify the potential effects of the project and steps built into it to mitigate any of these which are adverse.

1.34 The Planning Inspectorate advises that the PEIR can be prepared in the form of an early draft of the ES. The PEIR is one of a suite of documents that supports the formal public statutory consultation stage, prior to a DCO application being made. LRCH welcomes comment on the potential significant environmental effects of the Proposed Development, the survey methods and interim assessment findings described in the PEIR.

1.35 Written responses to the PEIR should be sent by 5 June 2015 to:

Email: consultation@londonparamount.info

Post: FREEPOST
ref. RTRB-LUUJ-AGBY
London Paramount c/o PPS Group
Sky Light Tower
50 Basinghall Street
London
EC2V 5DE

1.36 Telephone enquiries can be made to 0800 008 6765.

1.37 Please quote 'London Paramount Entertainment Resort Order' in any correspondence.

1.38 Following consideration of all of these comments, the Applicant will finalise the DCO application, including the ES, and submit these to the Planning Inspectorate for examination.

1.39 The remainder of this document summarises in non-technical language environmental information relevant to the proposed London Paramount Entertainment Resort and the work that has been undertaken so far towards the preparation of the Environmental Statement. If a fuller understanding of issues is required, the full PEIR may be downloaded from the London Paramount website or from the project pages of the Planning Inspectorate's National Infrastructure Planning website:

(http://infrastructure.planningportal.gov.uk/projects/south-east/london-paramount/)

# Two ◆ Relevant law and policy

## PLANNING AND TOURSIM POLICY

2.1 The National Planning Policy Framework ('NPPF'), which has been in existence since March 2012, provides the main reference point for all planning policy in England. Alongside the NPPF, the Government released in March 2014 National Planning Practice Guidance ('NPPG'). This explains in practical terms how national planning policy should be implemented in local planning policy and decisions.

2.2 For Nationally Significant Infrastructure Projects a parallel set of policy documents, National Policy Statements ('NPS'), have been produced to provide the policy basis on which projects subject to DCOs will be considered. However, at present there is no NPS for business and commercial projects such as an Entertainment Resort.

2.3 There is, however, a Government Tourism Policy published by the Department for Culture Media and Sport ('DCMS') in March 2011. Referring to the scale and importance of the UK's tourism sector – the third most important in export earnings and the fifth largest sector overall – the document highlights that only 40% of UK national spend on holidays is spent within the UK and that the tourism sector is disproportionately driven by small and medium-sized businesses.

2.4 Government Tourism Policy concludes that the industry in the UK requires higher skill levels, better management, more resilience to poor weather and better provision for domestic package holidays.

2.5 *VisitBritain* and *Visit England* are agencies of DCMS. Both have policy documents setting objectives of diversifying, growing, and improving what the nation offer to tourists, whether they are from the UK or abroad.

### Local planning policy

2.6 The Proposed Development will be located on land at the Swanscombe Peninsula that falls within the administrative areas of two local authorities - Dartford Borough Council; and Gravesham Borough Council.

2.7 Both local authorities are located within Kent, which also has a County Council (Kent County Council or 'KCC').

2.8 Relevant planning policy in this case is the responsibility of the Boroughs and in both cases new local plans are in preparation. However, the Government is also setting up the Ebbsfleet Development Corporation ('EDC') to deliver a new 'garden city' of up to 15,000 homes in the locality, supported by £200m of infrastructure development. The

proposed area of EDC includes most of the Project Site. The EDC will be responsible for plan-making and determining planning applications made in its area.

2.9 Most of the Project Site lies outside of the Metropolitan Green Belt, but the very southern parts of the Project Site includes Green Belt land within which improvements to the A2(T) junction are proposed.

**Other relevant national policy**

2.10 The UK has adopted policies stemming from various international treaties and European Directives concerning different aspects of environmental conservation. The most relevant are:

- *The Habitats Directive*, which protects the most important wildlife habitats in Europe, known as *Natura 2000* sites, as well as wading bird habitats protected internationally under the Ramsar Convention. The processes and policies forming the Habitats Regulations, which implement the Directive, also implement the EU *Wild Birds Directive* in the UK. Much of the Thames Estuary and adjacent coastal land are areas affected by the Habitats Regulations.

- *The Water Framework Directive* that integrates policy on the sustainable use of rivers and their protection and improvement. The Environment Agency has produced a River Basin Management Plan for the Thames River Basin that includes policy relevant to the Proposed Development. *The Marine Strategy Framework Directive* allows for a similar 'joined up' approach to the protection of the sea and, whilst the nearest sea area to which the Directive relates is 30km east of the Swanscombe Peninsula, nevertheless this Directive and the UK Marine Strategy are relevant. Under the UK's Marine and Coastal Access Act 2009, the waters adjoining the Swanscombe Peninsula are within the South East Inshore Plan area, but this document has yet to appear.

- *The Air Quality Directive*, which establishes acceptable levels of pollutants as set out in specific UK regulations. The South East of England suffers periodically from poor air quality and these regulations aim to ensure new development leads to no worsening of this.

# Three ◆ Description of development

## OVERVIEW

3.1 The UK has a large and internationally highly regarded creative industry in the moving picture and television sectors. Many well-known and much loved films and TV shows are made either completely or substantially within the UK, including many that are strongly associated with this country, and others that are probably thought of by most people as Hollywood productions.

3.2 The UK has gone some way to capitalise on the success of these industries with studio tours and visitor attractions themed around specific films or TV shows. However, the UK does not have themed entertainment resorts of the type that have proved very popular and successful elsewhere in the world.

3.3 Taking account of:

- the scale of the UK domestic tourism and leisure market;
- the extent to which this market is under-served by existing provision and hence is a captive market for foreign-based attractions;
- the status of London as a World City;
- the UK's convenient location as an international flight hub and highly developed airport infrastructure;
- the strong attraction of London to the international leisure and conferencing industries;
- the high quality of the UK workforce; and
- the pre-eminence of the English language within business and leisure;

- LRCH believes an opportunity exists to create an entertainment resort that goes far beyond any existing UK theme park or leisure resort, which truly celebrates the UK's rich culture and heritage in film and TV.

3.4 Whilst a commercially driven proposition, the Entertainment Resort will also be designed and built to high environmental and sustainability standards, offering highly efficient and low carbon services with limited impact on local utilities. Proximity to national and international rail and with water links to central London and the potential for an interface with cruise ships mean that significant volumes of visitors might travel to and from the site without using road transport. Moreover, river access will enable much of the movement of construction materials and freight, and removal of waste materials, to be by barge.

3.5 By reducing the propensity for UK residents to travel overseas for short breaks and holidays, the Entertainment Resort aims to reduce the carbon footprint and congestion associated with such travel.

3.6 In economic terms the project seeks to address the problem that 60% of the money Britons spend on holidays is spent abroad. With its international rail, air and water links it is expected a high proportion of the visitors to the Proposed Development will be from abroad, boosting the local and national economy.

## THE MAIN COMPONENTS

3.7 The DCO process requires that LRCH defines the Proposed Development as the 'Principal Development' and 'Associated Development'. The Principal Development is the part of the project which requires a DCO. Associated Development are those parts of the project that directly support the construction or operation of the Principal Development.

**Principal Development**

3.8 The Principal Development comprises a 'Leisure Core' up to 50 hectares in area, themed around the films and television programmes of Paramount Pictures leading British television and film produces including, but not limited to, the BBC and Aardman Animations. The Principal Development consists of:

- up to 210,000m$^2$ of indoor and outdoor spaces for events, themed rides, attractions, shows and parades, entertainment venues, cinemas, theatres and nightclubs;
- up to 25,000m$^2$ of ancillary food and beverage facilities i.e. cafes, restaurants and bars;
- up to 15,000m$^2$ of ancillary retail facilities;
- hotels with up to 2,500 bedrooms (as part of a total provision of up to 5,000 bedrooms across the Proposed Development as a whole);
- up to 27,000m$^2$ of service facilities including guest services;
- a visitor entrance square with ticketing facilities and related commercial uses;
- associated car parking as part of a maximum provision of up to 14,000 permanent spaces;
- hard and soft landscaping including amenity water features including ponds and canals;

3.9 The Leisure Core will be set within a carefully designed landscape incorporating trees, shrubs, grassed areas, paved and gravelled areas and walkways and water bodies. There will be careful separation of motorised vehicles and people such that once visitors arriving by road have left their car or bus they spend their entire time in a car-free environment. The layout will be designed fully with the needs of less mobile guests at the fore. The layout will be child and family-friendly with clear way-marking and focal points for groups to meet.

3.10 The Entertainment Resort will include a number of themed rides and attractions which are being designed by leading designers and operators.

3.11 Visitors will be able to make use of cafes, restaurants and bars as well as a wide range of retail outlets, all themed around Paramount's and others' productions and brands. The emphasis will be very much on creating a relaxed, safe atmosphere and licensed premises within the Entertainment Resort will be carefully designed and managed with this in mind.

3.12 The Leisure Core will be an area accessible only to paying guests and as such it will be designed with a secure fence and controlled access points.

**Associated Development**

3.13 The remainder of the Entertainment Resort outside the Leisure Core will also be designed on themes of prioritising pedestrian and, in this area also, cycle transport. Buildings will be set within a landscaped environment that will contain an internal road network with access points into the Leisure Core for servicing and car parks.

3.14 Outside the Leisure Core, the Proposed Development will be publicly accessible with ticketed or secure access only to individual components such as the water park, conference space, creative industries hub, and staff training facilities. A pedestrian route will be created to the waterfront areas and promenade on the western side of the Swanscombe Peninsula.

3.15 In this area will be located:

- hotels with up to 3,500 bedrooms as part of a combined provision of up to 5,000 hotel bedrooms across the Proposed Development;
- up to 25,000m$^2$ water park featuring leisure pools, flumes, slides and other attractions located mainly within a purpose built landmark building;
- up to 30,000m$^2$ of space for conferences and exhibitions, also suitable for music and indoor sports;
- up to 20,000m$^2$ creative business hub for creative industries including studios, workshops and offices;

- ancillary food, beverage and retail facilities;
- staff and other training facilities;
- a transport interchange enabling visitors to disembark from buses, coaches, taxis and a rapid transit system linking Ebbsfleet International Station to the entrance square of the Proposed Development;
- improvements to the existing jetty and adjacent wharf on the River Thames to assist access by boat for visitors and staff and the loading and unloading of construction materials and waste;
- the creation of a floating pontoon for use by visitors and staff;
- surface level and/or multi-storey car parking facilities as part of a maximum provision of 14,000 permanent car spaces, 100 coach spaces and 355 motorcycle spaces, cycle parking and pedestrian facilities;
- extensive areas of parkland and nature conservation habitat and pedestrian walkways including an area of promenade on the western shore of the peninsula. A green zone of wildlife habitat creation and environmental enhancement will be formed around the northern and eastern shores of the Swanscombe Peninsula;
- supporting gas, electricity, water, waste water, heating and cooling networks, a 8,000$m^2$ waste management facility, power generation (15,000$m^2$) and distribution (6,000$m^2$) spaces; and
- emergency and security services infrastructure including medical and fire points.

3.16 In addition to the above features the landscape strategy for the Proposed Development will incorporate drainage, flood protection, public art, earth bunds, planting, protection of archaeological and paleontological interest, security measures and lighting.

3.17 The Entertainment Resort project requires extensive works to enable access by road and from the rail network. The DCO application includes two different options for a 2.8km dual carriageway access road linking the Entertainment Resort to a modified and enhanced junction between the A2(T) and B259 (known as Options A and B). Only one option would be implemented, not both. This new road link would incorporate several bridges and tunnel sections and a flyover junction with the A2(T).

3.18 At Ebbsfleet International Station a new transport interchange will be built to enable passengers to transfer from the railway station to a transport interchange at the entrance to the Leisure Core.

3.19 A separate route into the Entertainment Resort will provide a connection from Swanscombe Station and there will be other entrance points to the publicly accessible areas.

**Hotel bedrooms and car parking**

3.20 The precise allocation of hotel bedrooms and car parks between the Leisure Core and the wider Entertainment Resort and their exact location and form will be determined at a later stage. However the maximum numbers will be 5,000 hotel bedrooms and 14,000 car parking spaces. A large proportion of the car parking spaces will serve the Leisure Core, catering for people visiting for the day or evening as well as some staying overnight. It is likely this will include an element of multi-storey parking, with a maximum height of seven storeys. There will be up to 2,000 overspill parking spaces.

## PROJECT SITE SELECTION

3.21 Given its intended market, the Proposed Development needs to be close to and with excellent transport links from Central London. It needs to be highly accessible by road, national and international rail, and, ideally a tidal waterway. Hence a location to the east of London with a Thames waterfront is ideal. HS1, the international railway from London St Pancras to the European Continent, passes through Ebbsfleet International Station, which is the first stop for international services. Hence a location south of the River Thames, in north Kent, was preferred. This location also benefits from being close to the national motorway network.

3.22 The site had to be free of significant constraints to development such as major wildlife protection designations or unstable or highly contaminated land. It also would ideally present a 'blank canvas' to architects and engineers and not be constrained by requiring to be built in a particular style to match a pre-existing historic townscape or landscape.

3.23 LRCH considered numerous possible sites before settling on the Swanscombe Peninsula. These included former clay pits north of London and land near Chelmsford in Essex and St Alban's in Hertfordshire. Several legacy sites used for parts of the 2012 London Olympics were also considered. A key site selection criterion was to minimise, and where possible avoid, the relocation of residential occupiers, a requirement that the Project Site fulfils.

3.24 On balance, the Swanscombe Peninsula proved to be the preferred site for the Entertainment Resort as it fulfilled all of the desired criteria and is also sufficiently large to encompass all proposed elements of the development, including associated transport connections.

# Four ◆ EIA Scoping and ES Structure

## EIA SCOPING

4.1 An EIA scoping request was issued to the Secretary of State by LRCH for the Proposed Development on 7 November 2014. On 19 December 2014 the Secretary of State issued a Scoping Opinion, confirming the information that should be provided in the ES for the Proposed Development. All consultation responses received up to and including 9 December 2014 from the prescribed consultation bodies were adopted through the Scoping Opinion, which is available on the Planning Inspectorate website:

http://infrastructure.planningportal.gov.uk/projects/south-east/london-paramount/?ipcsection=docs

4.2 The PEIR has considered the EIA Scoping Opinion as part of the ongoing EIA work.

## ENVIRONMENTAL ISSUES

4.3 The rest of this report summarises the current state of EIA knowledge of LRCH and its team in respect of the Proposed Development. Each topic is dealt with in a separate section below and in the order that the chapters appear in the PEIR and will appear in the final ES. As noted above, the work to conclude the EIA is not yet complete, as expected at this stage of the process. In some areas additional environmental baseline information is needed – sometimes data can be gathered only at certain times of the year – and the views of relevant third parties and consultation bodies are currently in the process of being gathered. Moreover, the work of assessing the effects of the Proposed Development and refining the development proposals cannot be completed until the consultations, of which the PEIR forms an important part, have been concluded.

4.4 The topics are covered in the following order:

- landscape and visual
- ecology
- air quality
- noise and vibration
- soils and ground conditions
- water resource management
- transport and infrastructure
- culture, heritage and archaeology
- socio-economics
- waste.

# Five ◆ Landscape and visual

## INTRODUCTION

5.1 The landscape and visual assessment work is being carried out for LRCH by Chris Blandford Associates ('CBA'), who are qualified and experienced landscape architects.

5.2 These are two separate but closely related issues to consider: landscape effects and visual effects.

5.3 Landscape concerns the character and physical nature and appearance of the areas including and surrounding the Project Site. Landscape assessment is particularly concerned with how the character of this might change as a result of the Proposed Development. This includes both the area within the Project Site, where there will be direct effects, and in the surrounding area from which the Proposed Development might be visible.

5.4 Visual assessment concerns how visible a project is and how it fits within views at various distances from and locations around a site.

## BASELINE CONTEXT - LANDSCAPE

5.5 The area to the south of the River Thames and east of the Dartford crossings is a varied mix of urban areas, areas affected by former mineral extraction - which might be called disturbed or despoiled 'urban fringe' areas of semi-rural landscape character - and rural areas. The riverscape of the Thames is also a distinctive feature of the locality.

5.6 Many parts of this area are subject to considerable change due to the decline of traditional industries and proposals for comprehensive regeneration.

5.7 The quarrying of chalk and manufacture of cement has been a key historical influence on the Swanscombe Peninsula.. Current land uses include extensive areas of marsh, semi-mature woodland and grassland. There are grassed embankments and flood defences as well as industrial premises. Access is limited to a small number of public footpaths. The area is a medium to large scale generally open landscape with a windswept character. The skyline is dominated by overhead power lines and pylons, dock cranes, wind turbines and large industrial structures

5.8 Dividing the Peninsula and surroundings into Landscape Character Areas ('LCA'), the majority within the peninsula itself are assessed as being of high to medium landscape value. Remoteness and the riverside contribute to a distinctive sense of place creating

amenity value for walkers. This contrasts with the strongly industrial LCAs of other parts of the peninsula, which are of low landscape quality.

5.9 The Ebbsfleet Valley has been subject to major change in the previous centuries. Unusual landforms including chalk spines and cliffs have resulted from quarrying and the deposition of cement kiln dust. Road and railways slice across the valley whilst much of the natural drainage to the Thames has been culverted beneath roads and industry. The latest major intervention has been HS1 and the Ebbsfleet International Station.

5.10 The Ebbsfleet River is now only visually apparent for a short distance before it meets the River Thames and forms a secluded corridor in the wider landscape, a sequence of wetlands in a narrow floodplain incorporating lines of trees interspersed with marshlands. Embankments and slip roads often hide the river from view.

5.11 Overall the Ebbsfleet Valley is assessed as being of medium-low landscape value with the exception of the short river corridor.

5.12 The A2(T) corridor is characterised by a busy major road and forms a boundary to the countryside further south. It is assessed as of low landscape value.

## BASELINE CONTEXT - VISUAL

5.13 Visibility of the Project Site has been mapped and visual appraisal studies undertaken. A total of 57 assessment viewpoint locations have been identified using a technique called 'Zones of Theoretical Visibility'. This is based on the size and shape of the proposed development and therefore allows 'before' and 'after' photomontages to be prepared, and hence any changes to the design or screening to be considered. These viewpoints are subject to discussion with local authorities – KCC, the Borough Councils of Gravesham and Dartford, Thurrock Council (across the Thames in Essex) and the Kent Downs Area of Outstanding Natural Beauty Unit.

## PRELIMINARY ASSESSMENT OF EFFECTS

### Landscape

5.14 Within the wider landscape setting, the Proposed Development, once operational, is considered likely to reinforce the established character of the Thames Gateway.

5.15 There will be substantial and permanent changes to the landscape character of the Swanscombe Peninsula itself. Considerable effort has gone into landscape design strategies as a part of the design process and hence the residual effects on the Swanscombe Peninsula are likely to be neutral or minor beneficial.

5.16 There is considered likely to be change to the landscape character of the Ebbsfleet Valley through which the main access to the Proposed Development will run, and the A2(T) landscape corridor will also experience minor changes. These changes are anticipated as being capable of successful integration without significant adverse effects.

**Visual**

5.17 Some views will be affected by new buildings and structures such as rides and hotels. Buildings and structures in the Leisure Core will be visible in views from the Thurrock area to the north of the Thames, including from the Thames Path and other viewpoints close to the Project Site.

5.18 No areas within the Project Site or in the study area considered by the landscape assessment are subject to any landscape protection designation.

**Designated (protected) landscapes**

5.19 The Kent Downs Area of Outstanding Natural Beauty is approximately 5km to the south of the Project Site. Belhus Park and Gravesend Cemetery, both Historic Parks and Gardens, are at their closest points, 4.7km and 1.7km respectively from the Project Site.

# Six ◆ Ecology

## INTRODUCTION

6.1 The ecology work is being carried out for LRCH by Chris Blandford Associates, qualified and experienced ecologists.

## BASELINE CONTEXT

### Protected areas

6.2 No areas, either within or near to the Project Site, carry national or international wildlife protection designations. The nearest site protected by a European and international designation is the Thames Estuary and Marshes Special Protection Area and Ramsar wetland, some 7.5km to the east. These are designated European and International sites for the protection of wild birds and wetlands respectively. Further away, the Medway and Swale estuaries have the same protection .

6.3 There is a nationally protected Site of Special Scientific Interest ('SSSI') across the River Thames to the north-west, at West Thurrock Lagoon and Marshes. The Baker's Hole SSSI lies within the Access Corridor. However, this SSSI is designated for its geological, rather than ecological, interest.

6.4 Part of the Ebbsfleet Valley within the Project Site is within the Ebbsfleet Marshes Local Wildlife Site ('LWS'). Another LWS lies close to but outside the Project Site to the south of the North Kent railway.

### Baseline surveys

6.5 Various wildlife and habitat surveys were undertaken between Spring 2012 and Spring 2013, focussed mainly on the Swanscombe Peninsula. These surveys are described in chapter six of the PEIR.

6.6 Further surveys commenced in Autumn 2014 and will continue to collect data until Summer 2015.

## PRELIMINARY ASSESSMENT OF EFFECTS

6.7 Much of the Proposed Development will be constructed on post-industrial brownfield land where there is a degree of ecological value for a limited range of habitats and species. The master plan for the Proposed Development proposes a significant amount

of landscaped and natural areas and some of the existing ecology of value can be incorporated. For other features it will be possible to incorporate mitigation to ensure an overall 'no net loss' of ecological habitats.

6.8 There is potential for adverse effects to ecology both on the Project Site and in the surrounding areas, including the River Thames. Many of the effects are likely to be during the construction phase. A Construction Environmental Management Plan ('CEMP') will be developed, approved and implemented to minimise and mitigate these.

6.9 There are parts of the Project Site, including Black Duck Marsh, Botany Marshes, Broadness Marsh, where large elements of existing habitats are to be retained. These areas may be enhanced through active management such that they will compensate for other areas where habitats may be adversely affected. Additional off-site mitigation, such as the creation and/or enhancement and management of wildlife areas outside the Project Site, may be used to compensate for potential ecological effects that may arise from the Proposed Development.

6.10 There is, likewise, potential for some potential adverse effects to ecology in the Ebbsfleet Valley. However, mitigation including through a CEMP will seek to avoid, reduce or compensate for these effects. Mitigation may include the reconnection of isolated areas of wildlife habitats. Some of the habitats and species identified may carry legal protection. Accordingly, any mitigation measures will be sensitively designed and agreed to deal with such matters.

**Possible effects on protected areas**

6.11 Areas with international and European designations are at some distance from the Project Site. However, because these sites are on the same coast as that affected by the Proposed Development, it may be necessary to understand the potential for effects. This will take into account the considerable wider development pressures within the Thames Estuary and the possibility that the increased numbers of people in the wider area might affect these sites.

6.12 Under the Habitats Regulations it might be necessary to understand (by preparing a 'Screening Assessment') whether the project might affect these areas and whether any further assessment will be necessary.

# Seven ◆ Water resource management

## INTRODUCTION

7.1 The water resource work is being carried out for LRCH by Buro Happold, who are qualified and experienced environmental consultants.

## BASELINE CONTEXT

### Flood Risk and Surface Water Drainage

7.1 The principal risk to the Proposed Development is from tidal river sources. The Project Site is currently protected by flood defences sufficiently effective that they should only fail in an extreme storm that would occur an average once in a thousand years - a 1 in 1,000 year standard. It is proposed that flood defences will be raised by around one metre to ensure that this level of protection is maintained throughout the 60 year design life of the Proposed Development, allowing for predicted sea level rises. This approach has been discussed and agreed with the Environment Agency ('EA').

7.2 An additional flood risk to the development is from surface water, which arises from rainfall. The current surface water management system consists of a network of ditches that discharge to the river via a 1.6m diameter outfall.

7.3 At present, it is not considered that there are significant flood risks from other sources.

### Water quality

7.4 There are a number of water bodies and marshes that will be protected in terms of water quality including the River Thames, River Ebbsfleet, Dry Valley at Bluewater, Black Duck Marsh and Botany Marsh.

### Groundwater

7.5 Existing data suggest that groundwater levels vary across the site between 0-5 metres above low tide level. Groundwater levels are likely to respond to tide levels in the Thames and no element of the Proposed Development would affect this relationship.

## PRELIMINARY ASSESSMENT OF EFFECTS

### Flood risk and surface water drainage

7.6 Drainage for the Proposed Development will be designed to ensure the proposed drainage system can cope up to a 1 in 2 year flood event, with no above-ground flooding up to a 1 in 30 year event. Drainage flows of up to 1 in 100 year events will be contained within the Proposed Development. It is envisaged that all surface water flows will be discharged directly to the River Thames. There will be no discharge to groundwater. Sustainable Drainage System ('SuDS') principles will be adopted across the Proposed Development, primarily for improving biodiversity, water quality and landscape rather than for the purpose of recharging groundwater. The on-site drainage system will require sufficient storage for the combined event of storm conditions and a high tide on the Thames, which would prevent or 'tide-lock' flows into the river. The probability of this combined event will be agreed with the EA.

### Water quality

7.7 The risk of mobilisation of contaminants, including cement kiln dust, will be mitigated by adopting a 'no discharge to groundwater' approach. Pollution control measures will be adopted across the Project Site. Careful consideration and analysis will be carried out with particular regard to Black Duck Marsh and Botany Marsh, to ensure that the water environment is not compromised. It is anticipated that an assessment in accordance with the Water Framework Directive will be necessary to ensure that water quality in the River Thames will not be compromised.

### Groundwater

7.8 The development will largely be capped off with ground remediation and no discharge to groundwater is proposed. It is considered unlikely that significant adverse effects on a groundwater body will occur as a result of the development. Detailed consultation with the EA will be required to demonstrate this.

# Eight ◆ Soils and ground conditions

## INTRODUCTION

8.1 The soils and ground conditions work is being carried out for LRCH by Atkins, who are qualified and experienced environmental consultants and engineers.

## BASELINE CONTEXT

8.2 To date, all information has been assembled by a desktop review of available ground investigation reports. Ground investigations at the site will start in May 2015.

8.3 Historical uses of the Project Site include quarrying, cement works, deposition of cement kiln dust, waste recycling, a tar distillery, chemical and paper works.

8.4 Much of the Project Site comprises 'made ground', that is material that has been placed there by human intervention. These overlie river alluvium such as silts, mixed with clay, gravels and peat. In places these natural deposits appear at the surface. The solid bedrock beneath the Project Site is chalk.

8.5 The ground contains aquifers in various different parts of the natural deposits. The underlying chalk is considered a principal aquifer. Ground water flow through the aquifers is to the north, to the Thames.

8.6 Surface water is present in the form of various ponds and drains as well as the River Ebbsfleet.

8.7 There are some potential sources of contamination relating to the previous quarrying, cement, and industrial activities. The aquifers, surface water bodies, River Thames, nearby nature conservation sites as well as the development itself are all potentially vulnerable to damage from existing contaminants present in the ground. This contamination will be identified and managed prior to and during the construction phase.

## PRELIMINARY ASSESSMENT OF EFFECTS

8.8 More often than not, the most appropriate approach for dealing with contamination is to isolate it and contain it within the engineering design of the ground works undertaken during construction. This requires a high level of knowledge of the location and type of contaminants, which will become clearer once ground investigation work is complete.

8.9 Once capped, for example by hard-standing, and/or contained, sometimes with dedicated drainage and treatment of water released from pockets of contamination and sometimes with management of gases released from contaminants, the overall condition of the ground is considered to be improved because the vulnerable water bodies that might have been polluted by it have been protected.

8.10 Sometimes it is necessary to remove or to clean up contaminated soils on site.

8.11 Studies undertaken to date have indicated an absence of some of the more damaging potential pollutants (e.g. those present in sites used for chemical works or oil refineries). The preliminary conclusion is that the effects of the Proposed Development on soil and ground conditions will be overwhelmingly beneficial due to the containment and positive management of whatever contamination is found to exist.

8.12 To a large extent mitigation is built into careful, risk assessed, methods of working and close monitoring of water and spoil in and near excavations and piling areas. Very many different construction techniques can be used to contain contamination and avoid its spread, and to protect new buildings and structures from damage and risks such as of gas build up.

# Nine ◆ Transport and access

## INTRODUCTION

9.1 The transport work is being carried out for LRCH by WSP, who are qualified and experienced transport consultants.

## BASELINE CONTEXT

9.2 A key reason for selecting the Project Site as the location for the Proposed Development was the excellent existing transport connections:

- all major London railway stations are within one hour's travel time away by train, with London St Pancras being 17 minutes from Ebbsfleet International, which is on the international HS1 line. In addition, Crossrail might be extended to Swanscombe and beyond, further improving connectivity to and through Central London;
- there are excellent connections to all of London's five airports;
- the Project Site can be connected to Central London by fast water transport for visitors and employees. The Thames presents a significant opportunity for deliveries of goods and materials, particularly during the construction phase, and for the removal of waste;
- Kent Thameside is already served by the award winning *Fastrack* Bus Rapid Transit system which can easily connected to the Entertainment Resort with potential stops at the Leisure Core, exhibition facilities, water park, creative hub etc;
- The Project Site abuts existing residential and commercial areas and the master plan can thus include easy walking and cycling routes between the Entertainment Resort and local areas;
- Swanscombe Peninsula has excellent connectivity to the local, regional, and national road network and, in particular via the A2(T) to Kent's M2 and M20 motorways, the Channel Tunnel, and the M25 London orbital motorway;
- all required car and other motorised vehicle transport parking can be accommodated within the Project Site; and

9.3 The existing transport network in the area is busy in peak periods with a significant pattern of travel towards London in the mornings and a similar reverse pattern in the evenings.

## PRELIMINARY ASSESSMENT OF EFFECTS

9.4 Account has to be taken of seasonal and daily variation in transport conditions in the local area and in the patterns of movement that already exist on transport networks. To create a robust assessment a 'design day' of 80,000 visitors has been used and this has been assumed to be during a working day in a school term. This combination represents a 'worst case scenario' as, in reality, visitor numbers are likely to be at these relatively high levels mainly in school holidays and at weekends and public holidays.

9.5 Considerable opportunities have been identified to meet the additional transport demand arising from the Proposed Development. These include the new or enhanced links to railway stations, the new road to an enhanced junction with the A2(T), the use of the Thames ferry service and extensions to and enhancements of public transport. The effects of the proposals will be acceptable and in some areas might beneficially improve connectivity and reduce congestion and stress related to travel within, and to and from, Kent Thameside.

9.6 Whilst there will be significant new load on transport systems, these must also be considered against the possibility of the mixed use residential and commercial development of the area as part of Ebbsfleet Garden City that might otherwise occur and would have its own transport effects and improvements.

9.7 It is possible to envisage substantial enhancements such as the extension of Crossrail to Swanscombe and the significant advantages of new water transport that might enable existing movements of people, goods, and materials to transfer to these new services. An example might be a new river bus service across the Thames and linking Tilbury and Grays to Swanscombe, Dartford and Central London.

9.8 Discussions are in progress with transport providers and relevant consultees, including the Department for Transport, HS1, Eurostar, the Highways England, Thames Clippers and *Fastrack*.

9.9 The transport assessment work is in the process of being completed and identified impacts will be reported on in the ES chapter.

# Ten ◆ Air quality

## INTRODUCTION

10.1 The air quality work is being carried out for LRCH by Buro Happold, qualified and experienced environmental consultants.

## BASELINE CONTEXT

10.2 Some aspects of the Proposed Development may have a potential impact on air quality, including construction activities; construction and operational traffic and energy centre emissions.

10.3 Sensitive receptors which have been identified, both human and ecological, which might potentially be affected by air quality impacts associated with the Proposed Development. Consultation with the local authorities has included discussion on vulnerable receptors, existing air quality monitoring locations in the locality and the study methods that LRCH is using.

10.4 Baseline air quality monitoring data from 2012-2014 have been analysed, and it is evident that a number of nearby roadside sites have failed to meet air quality objectives for certain pollutants. This has resulted in a number of areas surrounding the site being declared as Air Quality Management Areas.

## PRELIMINARY ASSESSMENT OF EFFECTS

10.5 The detailed technical assessment work is progressing and air quality effects will be reported on in the ES chapter, including from an analysis of traffic modelling data that is being developed.

# Eleven ◆ Noise and vibration

## INTRODUCTION

11.1 The noise and vibration work is being carried out for LRCH by Buro Happold, qualified and experienced environmental consultants.

## BASELINE CONTEXT

11.2 Construction and operation of the Proposed Development will involve activities that have potential to create levels of noise and vibration that may be experienced outside the boundaries of the Entertainment Resort. These might affect people, businesses, property or the natural environment and hence require careful consideration. As well as activities within the Entertainment Resort it will also be necessary to consider transport activities associated with people, goods, and materials to and from it.

11.3 Work to establish the baseline context requires:

- consideration of relevant policy, guidance and regulation;
- discussions with relevant local authorities and stakeholders;
- surveys to identify current conditions;
- confirmation of methodologies for measuring effects.

11.4 The 'Noise Policy Statement for England', Local Plans, British and international Standards have been considered. The Swanscombe Peninsula falls neither within any Noise Abatement Zones nor Noise Action plan areas.

11.5 Workshops have been held with relevant officers from Dartford, Gravesend and Thurrock councils and other statutory consultees have commented through the EIA scoping process.

11.6 A series of preliminary noise surveys has been conducted in December 2014 and March 2015 at eight locations close to the site. Further studies are proposed north of the River Thames. Based on work to date there currently appears no requirement for a vibration survey.

11.7 Three dimensional modeling software is being used to assess effects. Baseline information and assumptions have been gathered and several scenarios, reflecting different potential construction and operation options, have been modelled. This enables designers to work out optimum solutions.

11.8 The noise surveys capture data reflecting existing conditions over short and long periods of time. In general these reflect the nature of the setting of the Proposed Development within urban fringe, adjacent built up and open areas and close to major rail and road corridors.

## PRELIMINARY ASSESSMENT OF EFFECTS

11.9 Potential noise effects have been considered for both the construction and operational phases of the Proposed Development. At this point in the assessment process (April 2015) there are insufficient data available on the likely changes to traffic patterns once the Proposed Development is operational to undertake a traffic noise impact assessment. This will be undertaken as data become available.

11.10 No significant ground-borne vibration is expected from the operation of the Proposed Development. This assumption is based on observations made at a similar developments in Europe and takes account of the large distances to the nearest residential properties.

11.11 Prediction of ground-borne vibration due to construction will be undertaken. It will be based on the methodologies set out in BS 5228-2 (a British standard for this type of assessment).

11.12 On the basis of the assessment work carried out to date in respect of construction noise (not including construction traffic noise) and operational noise (not including operational road traffic noise) it is provisionally concluded that significant adverse noise effects are unlikely to arise.

11.13 The predicted noise and vibration effects including operational road traffic will be reported on the ES.

# Twelve ◆ Cultural heritage

## INTRODUCTION

12.1 The cultural heritage work is being carried out for LRCH by Wessex Archaeology, who are qualified and experienced archaeologists and built heritage consultants.

## BASELINE CONTEXT

12.2 Work to date has examined published information and considered theoretical conditions through the creation of a 'deposit model'.

12.3 This work has concluded it likely that the site contains important remains dating to the Palaeolithic period, which extended from 900,000 years ago to 9,500 years ago. It is also likely that important remains relating to the prehistoric, Romano-British and Industrial periods will exist. The Access Corridor is an area of particular interest.

12.4 Designated features of heritage interest embrace a wide variety of different types and levels of importance and protection. These include Scheduled Monuments, Listed Buildings (three Grades), registered Parks and Gardens (three Grades) and conservation areas. Six such assets within the Project Site, a further 69 within 1 kilometre of it and 43 between 1-5 kilometres. The six within the Project Site include four Scheduled Monuments and two Listed Buildings (one Grade II*, the other Grade II). 57 of the other heritage assets noted are Grade II Listed Buildings, representing the most numerous and least protected buildings of historic or architectural interest.

12.5 The Grade II* Listed Building is a church and the Grade II is a footbridge across the A2.

12.6 In addition to these designated heritage assets, a further 67 assets have been identified from records relating to land within the Project Site. These essentially are records of features or finds made over the years, many related to the quarrying that has taken place at the site. They include sites of possible Romano-British occupation, jetties and abandoned vessels, industrial features and railways and they vary from being considered of negligible to high sensitivity. 14 are considered of high sensitivity.

12.7 For such a large area located next to the Thames, a major gateway to England, and to historic transport routes, it is not surprising so many heritage assets exist. The land has been subject to successive waves of activity, the most recent of which relate to the cement industry and construction of the HS1 railway. By understanding these assets it will be possible to develop the Entertainment Resort in a way that protects and in some cases enhances the state of knowledge of cultural heritage in the area.

## PRELIMINARY ASSESSMENT OF EFFECTS

12.8 The significance of archaeological finds can be assessed only by actual investigations. A programme of targeted geophysical, trenching or trial pits will be undertaken and reported in the ES and the design of the Proposed Development might be amended to reflect what is found. 'Watching briefs' during key parts of the construction phase, usually the excavation of foundations and drainage features, are likely to be a key part of the mitigation.

12.9 Where significant remains are discovered the appropriate response may vary from protecting them and leaving them in place, to excavation, recording and removal of key artefacts, to making them a feature of the development project.

12.10 Developments of this scale will virtually always encounter archaeological remains. Careful mitigation of any adverse effects on these is likely to result in overall effects being no worse than slight adverse.

12.11 Effects on the settings of Listed Buildings will continue to be assessed as the proposed design of the Entertainment Resort emerges. Towns and buildings are subject to constant evolution and change in their settings and it will be necessary to consider the effects of the Proposed Development whilst also considering what might otherwise be developed at the Swanscombe Peninsula.

12.12 The Proposed Development will also bring significant opportunities for furthering archaeological and cultural heritage knowledge and appreciation through programmes of community engagement, displays and interpretation.

# Thirteen ◆ Land use and socio-economic effects

## INTRODUCTION

13.1 The socio-economic work is being carried out for LRCH by Volterra, who are qualified and experienced economic impact consultants.

## BASELINE CONTEXT

13.2 The peninsula area includes extensive areas of grassland, scrubland and marsh, together with a disused water treatment plant, boat moorings, electricity and communications infrastructure and the Manor Way industrial estate.

13.3 The Access Corridor comprises predominantly restored areas of former mineral workings and landfill sites in its north-south section and, along the A2(T) corridor, agricultural land and woodland. In the area of the Access Corridor to the west of Ebbsfleet International Station is an overflow car park, and to the north of the A2(T) is a complex of greenhouses at Springhead Nursery.

13.4 The Project Site is bordered by residential areas, industrial estates, farmland and woodland, electricity transmission infrastructure and former mineral workings.

13.5 Considering the nature and scale of the Proposed Development it is necessary for information on the communities and economies it may affect to the gathered at the following scales:

| **Geographical Study Area** | |
|---|---|
| Immediate Impact Area | Areas close to the site |
| Local Area | Dartford and Gravesham (boroughs) |
| Sub-Regional Area | Kent and Medway (districts) |
| Regional Area | South East |
| National Area | England, GB, UK (depending on data source availability) |

13.6 A considerable amount of information is available from numerous published sources. In order to assess effects, this data will be assembled and considered, particularly considering:

- population statistics illustrating location, age and socio-economic profile
- qualifications, employment levels

- indicators of economic status such as levels of benefits claimed, health and life expectancy
- income levels
- types of employment by economic sector (e.g. industry, service, public sector) and occupation (e.g. professional, skilled, management etc).
- housing tenure (i.e. whether owner occupier, private rented, housing association etc), shortfall of housing provision, house prices
- crime statistics
- provision of healthcare, education, social services and social infrastructure
- visitor accommodation and tourism attractions, visitor numbers.

13.7 Much can be learned by comparing data for local, sub regional, and regional areas with national statistics. Given the amount and diversity of data, acknowledged study methods can be used. Experience of other major projects can be used to make accurate predictions. This enables the scheme to be designed and measures to be put in place to address any adverse socio-economic effects. An example of such measures is the extensive commitment to staff training and development that LRCH will make in support of the project.

## PRELIMINARY ASSESSMENT OF EFFECTS

13.8 The potential effects of London Paramount will be in the following areas:

- job creation;
- social infrastructure such as housing, health and education provision;
- local businesses;
- economic impact.

13.9 The construction phase will be distinct from the operation of the Entertainment Resort with a very different pattern of effects.

**Construction phase**

13.10 Constructing the Proposed Development will be a major project reminiscent of constructing the venues for the London Olympics and other recent large projects such as Heathrow Terminal 5, Crossrail, the Channel Tunnel and HS1 rail link. Overall, the effects of the Proposed Development's construction workforce and economic activities will tend to be positive, but it is also to be acknowledged that this requires careful monitoring and management to minimise any adverse effects on local communities.

**Operational phase**

***Job creation***

13.11 Around 13,000 'operation phase' jobs are expected to be created at the Entertainment Resort. Due to some of these being part-time, they are estimated to equate to around 9,800 full time jobs. In addition to these jobs a further 20,000 or so jobs, equating to 16,000 or so full time jobs, are expected to be created in the enterprises that will support the Proposed Development and the wider supply chain.

13.12 The jobs created will be across a wide range of sectors and skill levels, including skilled professional roles. Local schools, job centres and community groups are assisting LRCH to understand the mix of skills and resources available in the local labour pool. In turn, this will guide recruitment and training provision.

13.13 As noted, the Entertainment Resort will include provision for staff training and development, which will enable local school-leavers and job seekers gain the skills necessary to work to their full abilities within the Proposed Development.

***Social infrastructure***

13.14 The significant anticipated pace of development within the local area due to Ebbsfleet Garden City means that effects need to be assessed against a predicted future baseline and the enhanced social infrastructure in the Kent Thameside area.

***Local businesses***

13.15 Whereas the Entertainment Resort will create significant new market opportunities for local businesses supplying goods and services, it is also important to consider how it might compete with existing leisure and entertainment businesses and their abilities to attract labour. Some existing businesses on Manor Way within the Project Site will need to be relocated as a consequence of the Proposed Development

13.16 A significant positive effect is anticipated to be increased demand for hotel accommodation locally. Up to 5,000 hotel bedrooms will be provided within the Entertainment Resort and it is anticipated that 30% of overnight visitors will use these. It is expected that visitors may incorporate London Paramount into a trip that they would not otherwise make but during which they will do other things (visit Central London, visit friends and family, etc). Therefore, not all of the accommodation requirements of the Entertainment Resort visitors will be met on-site.

13.17 It is estimated up to 9,118 rooms will be needed off-site on a 'design day' (80,000 visitors). These will be across a full range of accommodation types (e.g. hotels, B&Bs and non-serviced accommodation), provided over a wide area of London and the South East.

***Economic impact***

13.18 The global leisure market is growing rapidly. Between 2009 and 2013 the numbers visiting the top 25 theme parks in the world increased by 16%. The Proposed Development is intended to be unique in its scale and variety. LRCH estimates 24% of overseas visitors will be people who otherwise would not have come to the UK. A significant proportion of visitors are expected link their visit to other visits within the UK.

***Job creation***

13.19 During the main construction phase between 2017 and 2020, approximately 5,200 construction workers are expected to be engaged at the Project Site on average with this peaking at approximately 6,300 during 2019. After opening and until 2024, ongoing construction is expected to employ approximately 715 construction workers.

***Social infrastructure and local business***

13.20 There is likely to be significant demand for accommodation in hotels, B&Bs and the private rented sector.

13.21 Wherever workers stay they will require feeding, laundry and basic services and are likely also to shop in the local area. Such a large workforce will also increase the demands on the local healthcare and police services. LRCH and its contractors will liaise closely with the local authorities and service providers to minimise adverse impacts. LRCH will expect the highest standards of health and safety practice from its contractors and of behaviour from their employees and sub-contractors. Mechanisms will be in place to terminate contracts when these standards are breached.

# Fourteen ◆ Waste

## INTRODUCTION

14.1 The waste work is being carried out for LRCH by Buro Happold, who are qualified and experienced environmental consultants.

## BASELINE CONTEXT

14.2 Work to date has focussed on the operational phase of the development and has comprised four main strands:

- examination of information and experience from existing developments likely to give rise to similar types and quantities of waste both to assess what volumes may be expected, based on anticipated visitor numbers, and to identify options for waste management;
- review of the legal, regulatory and policy context for waste in Kent Thameside;
- audit of existing waste management infrastructure in the area;
- discussions with local authorities of Gravesham, Dartford and Kent County Council.

14.3 This work has concluded that between 12,500 and 17,250 tonnes of waste might be produced per year. A wide variety of approaches and innovatory techniques for managing waste and recovering value from it have been identified.

14.4 A need has been identified for a waste transfer facility of approximately one hectare in area, to handle the waste generated during the operation of the Entertainment Resort. This has been fed into the master-planning process for the Proposed Development.

14.5 There is a very well established pattern of waste transport on the River Thames and several facilities exist that have facilities to receive water-borne waste in London - such as the Belvedere energy from waste plant in Bexley - and in Essex. The effects of waste collection vehicles on the local transport network is a concern for the local authorities and they have recommended that the Proposed Development should include state of the art waste management systems and become an example of best practice for the leisure industry.

14.6 A limited amount of work has so far been undertaken to address waste during the construction period. However all major construction contractors now build waste management into their proposals. It is extremely likely that water borne transport will

be used to remove construction waste based on a 'reverse logistics approach' using the barges delivering construction materials and plant.

## PRELIMINARY ASSESSMENT OF EFFECTS

14.7 The Proposed Development has the potential to generate a significant amount of waste during both the construction and operational phases. In the absence of effective waste management, a development of this scale could put pressure on the existing waste infrastructure in Kent, particularly in the local boroughs of Dartford and Gravesham.

14.8 Chapter 14 of the PEIR considers the potential construction and operational waste management issues associated with the Proposed Development. The assessment methodology being followed in the EIA is explained and the likely environmental effects and potential mitigation measures with regards to waste are explored. consideration noteworthy element is the anticipated use of the river to transport construction and operational waste.

# Fifteen ◆ Conclusion

## CONCLUSION

15.1 London Paramount Entertainment Resort will be a project unique in concept and scale. It will be a truly world-class resort. The proposed location at the Swanscombe Peninsula benefits from its proximity and accessibility to London, which is a World City and hugely attractive to overseas visitors, as well as to the sizeable UK domestic market for entertainment and holidays.

15.2 The Entertainment Resort will celebrate one of the most successful aspects of the UK's economy in the last few decades, film and TV productions, and take advantage of the growing world and domestic market for entertainment and themed holiday packages. It will also include significant exhibition, conferencing, and creative industry facilities.

15.3 In order to allow it to proceed, LRCH is preparing an application for a DCO. Detailed EIA studies are underway and are helping to guide the master-planning process for the Project

15.4 In order to determine whether and how the project proceeds, it is necessary for a comprehensive set of information to be provided, giving interested the opportunity to understand the project and its likely effects before making their comments. Comments from the current consultation, which the PEIR informs, will be taken into account as the EIA progresses and the scheme evolves.

15.5 Consultation and the use of feedback to inform the final form of development is a crucial part of the DCO process. There are a number of processes to followed and documents to be prepared and consulted upon. At the current stage, LRCH is required to publish and consult on a Preliminary Environmental Information Report (PEIR). This report in turn may take the form of an early, and therefore by definition incomplete, draft of the Environmental Statement LRCH is also required to prepare to identify the environmental effects of the project and which is to be submitted with the DCO application.

15.6 Written responses to the PEIR are welcomed and should be sent by 5 June 2015 to the contact addresses set out in paragraphs 1.35-1.37 of this report. ◆

LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER
PROJECT SITE REGIONAL - FIGURE 1.1

FOR CONSULTATION PURPOSES

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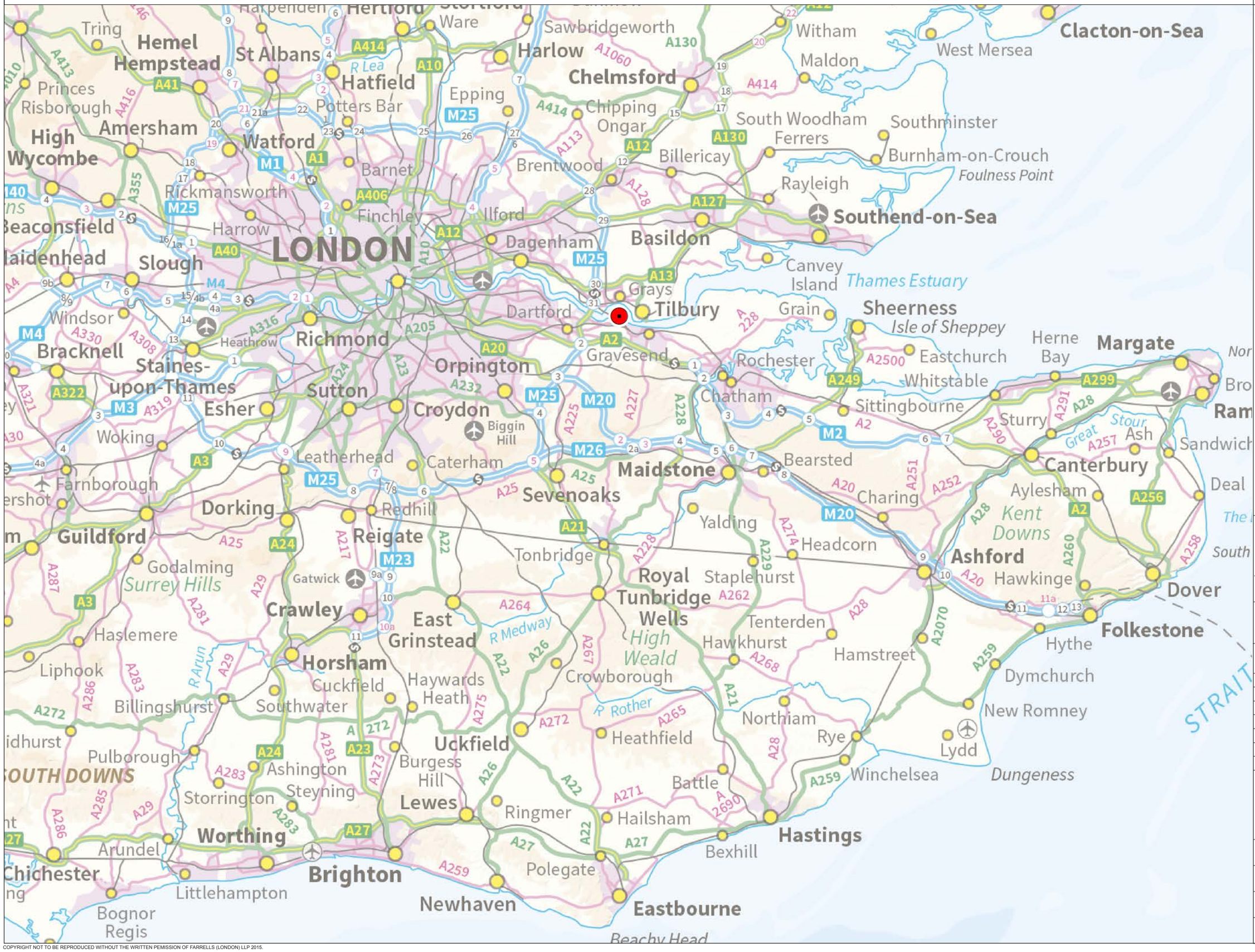


Key:

- Project Site

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LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER

PROJECT SITE REGIONAL

DARTFORD BOROUGH COUNCIL AND GRAVESHAM BOROUGH COUNCIL

ORIGINATOR REFERENCE:

APPLICATION NUMBER: BC080001

DRAWING REFERENCE: FIGURE 1.2

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LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER
PROJECT SITE AREA - FIGURE 1.2

FOR CONSULTATION PURPOSES

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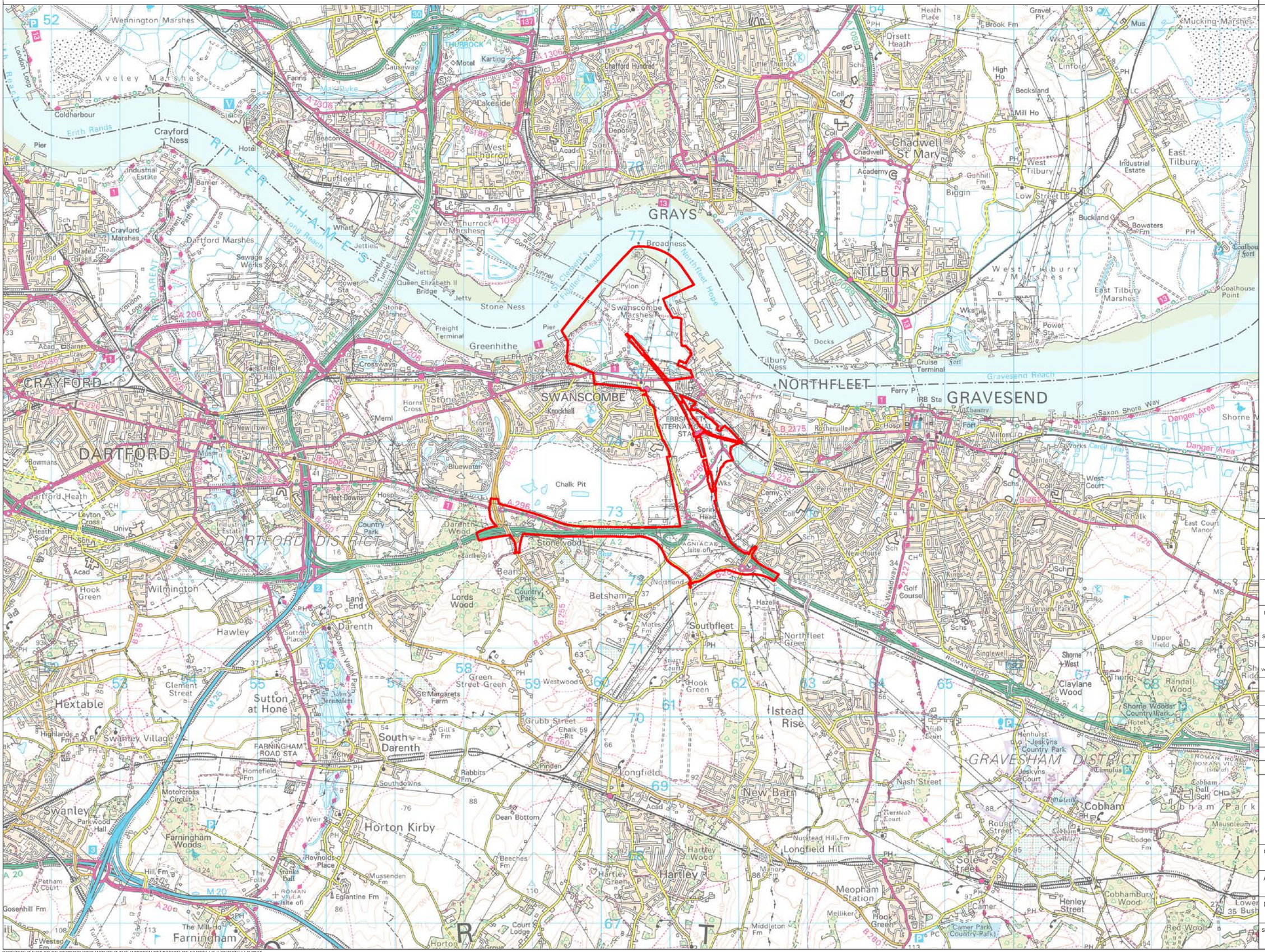


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LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER

PROJECT SITE AREA

DARTFORD BOROUGH COUNCIL AND GRAVESHAM BOROUGH COUNCIL

ORIGINATOR REFERENCE:

APPLICATION NUMBER:
BC080001

DRAWING REFERENCE:
FIGURE 1.2

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LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER
PROJECT SITE LOCATION PLAN LOCAL - FIGURE 1.3

FOR CONSULTATION PURPOSES

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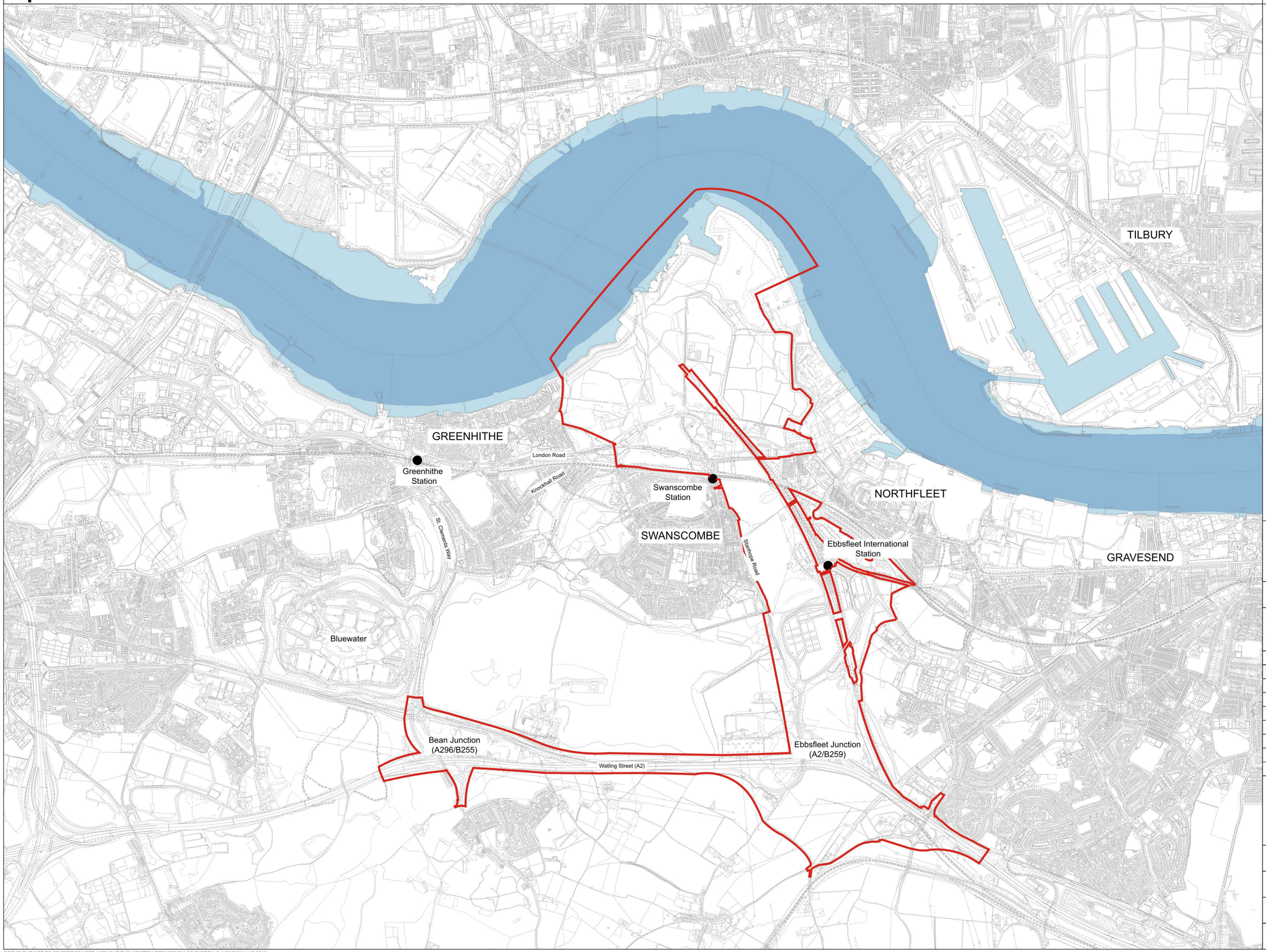
Paramount LONDON

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| A | 13/04/2015 | For Consultation Purposes | DC | KD | DT |

LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER

PROJECT SITE LOCATION PLAN LOCAL

DARTFORD BOROUGH COUNCIL AND GRAVESHAM BOROUGH COUNCIL

ORIGINATOR REFERENCE: TGSW-PEIR-FIG-1.3

APPLICATION NUMBER: BC080001

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LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER
FIGURE 3.2- ILLUSTRATIVE MASTERPLAN

APRIL 2015

FOR CONSULTATION PURPOSES

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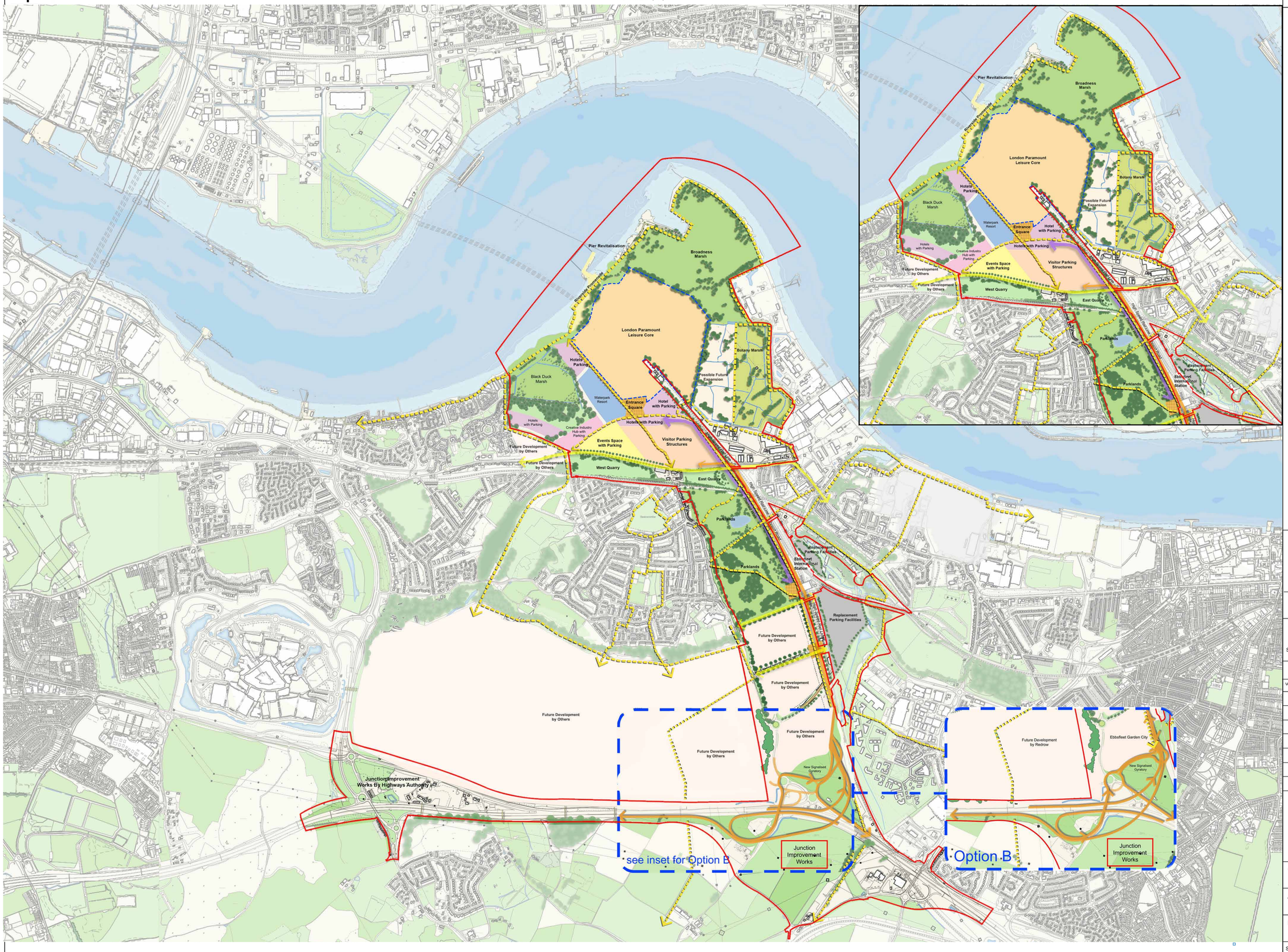
Paramount LONDON




Key:

- Order limits
- Land Train
- Fastrack
- Resrt Road
- River Ferry
- Pedestrians

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LONDON PARAMOUNT ENTERTAINMENT RESORT DEVELOPMENT CONSENT ORDER

FIGURE 3.2 -ILLUSTRATIVE MASTERPLAN

DARTFORD BOROUGH COUNCIL AND GRAVESHAM BOROUGH COUNCIL

ORIGINATOR REFERENCE: TGSW1-PEIR-FIG-3.2

APPLICATION NUMBER: BC080001

DRAWING REFERENCE: FIGURE 3.2

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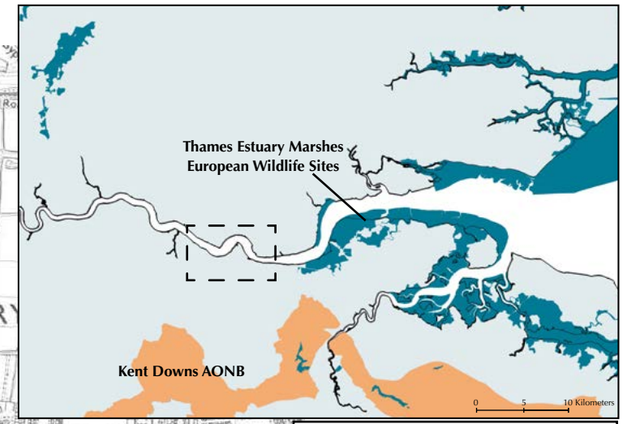


Legend

**DCO Boundary**

**Designated Access Land:**

**Country Parks**
1. Swanscombe Heritage Park
2. Darenth
3. Beacon Wood

**Access Land**

**Designated Nature/Geological Conservation Sites:**

**National Nature Reserves**
4. Swanscombe Skull Site

**SSSIs**
5. West Thurrock Lagoon and Marshes
6. Lion Pit
7. Swanscombe Skull Site (Geological SSSI)
8. Bakers Hole (Geological SSSI)
9. Darenth Wood

**Ancient Woodland**
10. Darenth/Ladies Wood
11. The Thrift
12. Parkhill Wood
13. Lord's Wood

**Local Wildlife Sites**
14. Alkerden Pit
15. Ebbsfleet Marshes

**Designated Heritage Assets:**

**Historic Parks and Gardens**
16. Gravesend Cemetery

**Scheduled Monuments**
17. Anglo Saxon Cemetery at Darenth Park
18. Medieval Woodland Boundary in Darenth Wood
19. Aspdin's Kiln
20. Paleolithic Sites near Bakers Hole
21. Paleolithic Sites near Bakers Hole
22. Neolithic Sites near Ebbsfleet
23. Neolithic Sites near Ebbsfleet
24. Springhead Roman Site
25. Roman Enclosure SE of Vagniacae
26. Tilbury Fort
27. Gravesend Blockhouse
28. New Tavern Fort/Milton Chantry

**Conservation Areas**
29. Greenhithe
30. Gravesend. etc.

**Listed Buildings**

EIA Scoping Report - Environmental Constraints

Client/Project

London Paramount Entertainment Resort
London Resort Company Holdings

Scale 1:25,000 @ A3

0 200 400 Metres

Date 27/10/14

Drawn by: HS

Checked by: DW

Revision:

Job Ref:

Fig. 5.2

N

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Legend

DCO Boundary

Extent of previous surveys, either fully or partially completed. Requires further full or verification surveys

Areas requiring full survey

2km buffer for ecological records data search (5km for bat records)

EIA Scoping Report - Ecology Study Area

Client/Project

London Paramount Entertainment Resort
London Resort Company Holdings

Scale 1:25,000 @ A3

0 250 500 Metres

Date 29/10/14

Drawn by: HS

Checked by: BW

Revision:

Job Ref:

Fig. 6.1

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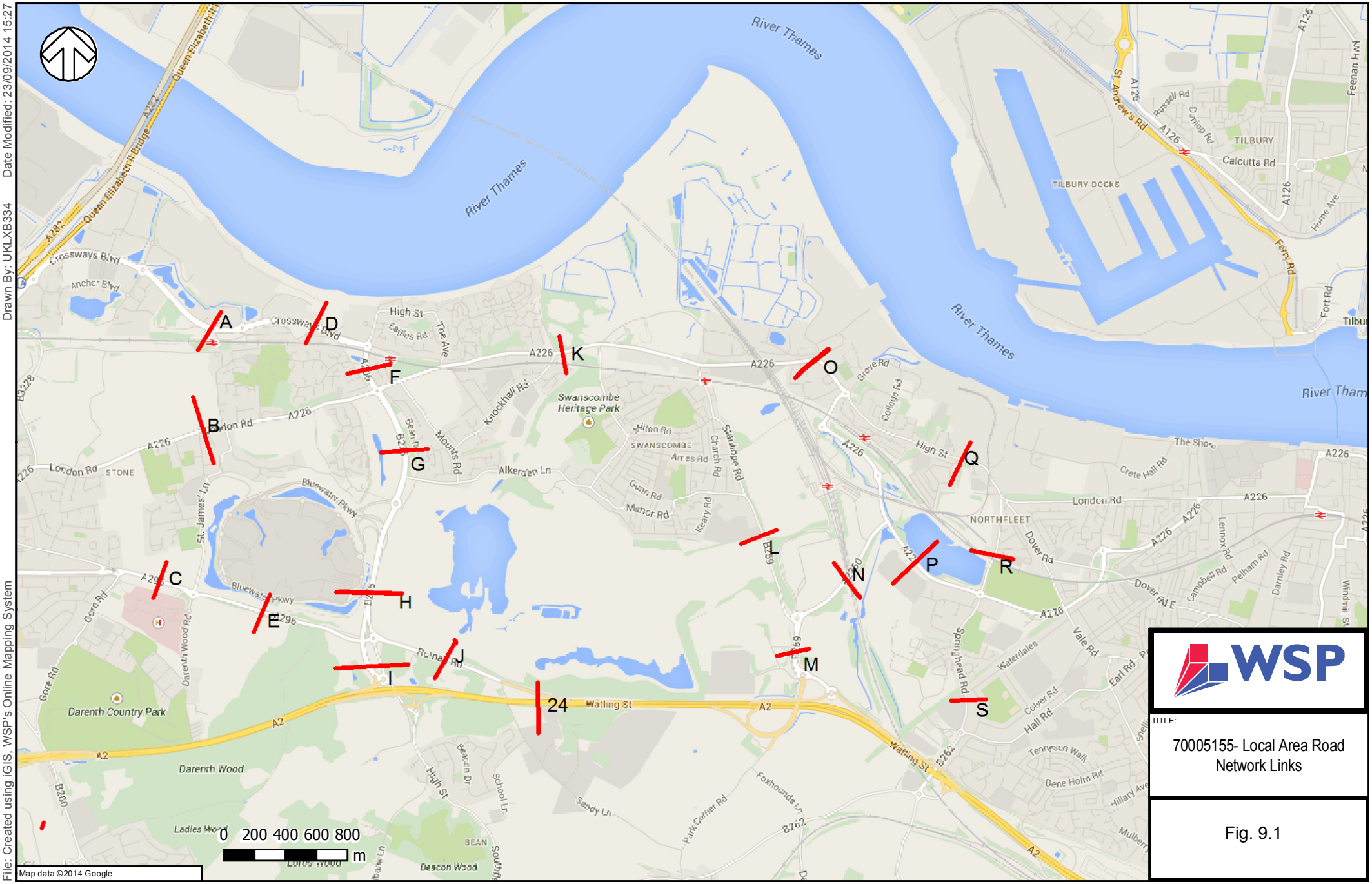


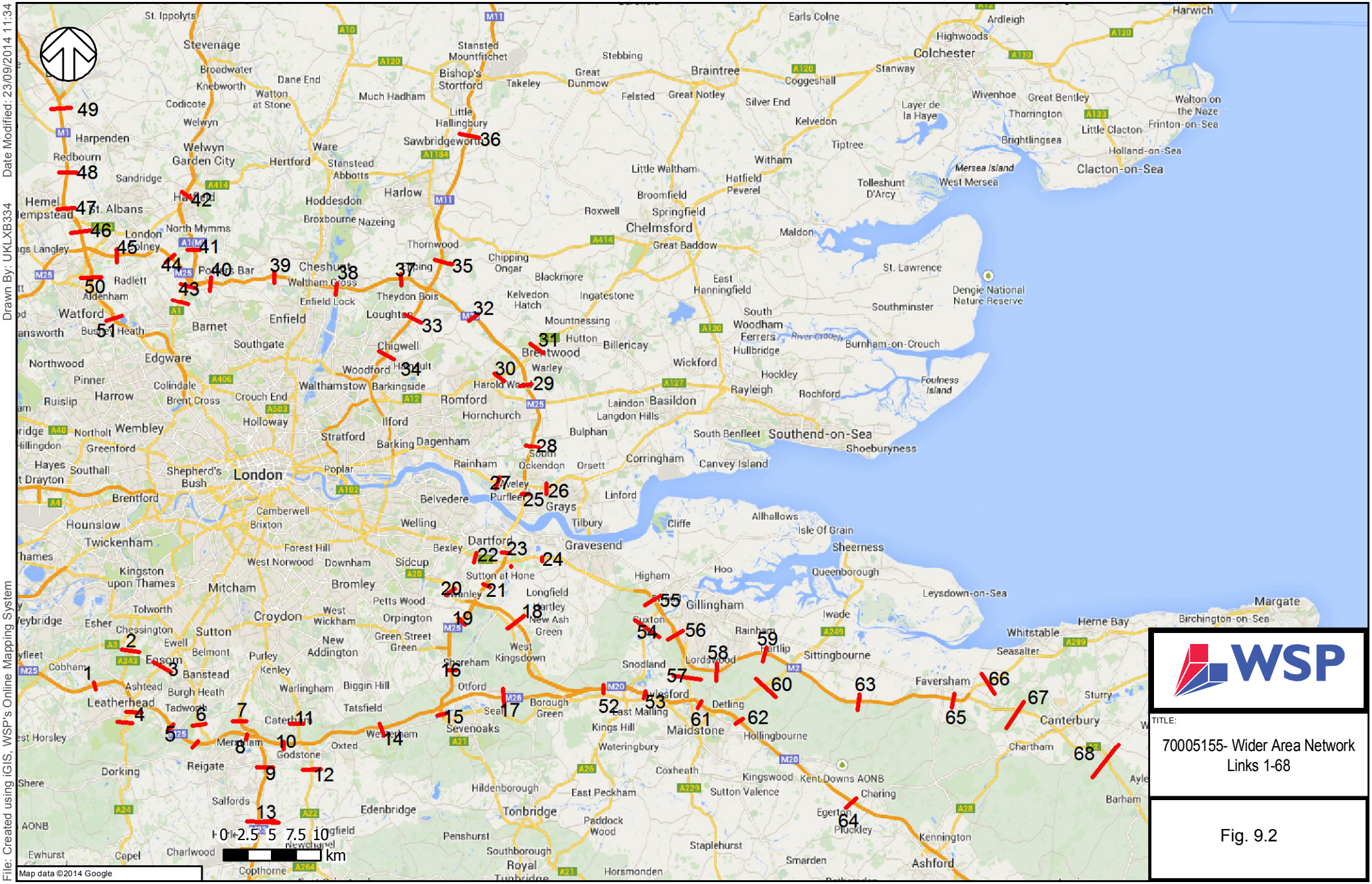

File: Created using iGIS, WSP's Online Mapping System  Drawn By: UKLXB334  Date Modified: 23/09/2014 15:27

WSP

TITLE:

70005155- Local Area Road Network Links

Fig. 9.1




File: Created using iGIS, WSP's Online Mapping System Drawn By: UKLXB334 Date Modified: 23/09/2014 11:34

WSP

TITLE:

70005155- Wider Area Network Links 1-68

Fig. 9.2

552000
557000
562000
567000
572000
178000
173000
168000
Halfway Reach
Erith Reach
Erith Reeds
The Lower Hope
Gravesend Reach
BEXLEY
DARTFORD
GRAYS
TILBURY
GRAVESEND
NORTHFLEET
Legend
Application boundary
500m Study Area
5km Study Area
EIA Scoping: Cultural Heritage Survey Area
Site Location, 500m Study Area and 5km Study Area
Client/Project
London Paramount Entertainment Resort
London Resort Company Holdings
Fig. 12.1
Scale 1:60 000 @ A3
0 1km
Date: 29/10/2014
Drawn by: AMB
Checked by: GC
Revision: 0
Job Ref: 106570
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Legend

- Indicative DCO Boundary
- Public Footpath
- Restricted Byway
- Path closed or use restricted
- Roads

Title

EIA SCOPING REPORT

EXISTING PUBLIC RIGHTS OF WAY

Client/Project

LONDON PARAMOUNT
ENTERTAINMENT RESORT

LONDON RESORT COMPANY HOLDINGS

| | |
|---|---|
| Scale 1:17,500 @ A3 (0m 175m 350m) | Date OCTOBER 2014 |
| | Drawn by: GM |
| | Checked by: DC |
| Fig. 13.1 | Revision: (-) |
| | Job Ref: |

NORTH

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Legend

Indicative DCO Boundary

Title

EIA SCOPING REPORT

INDICATIVE DCO BOUNDARY PLAN

Client/Project

LONDON PARAMOUNT
ENTERTAINMENT RESORT

LONDON RESORT COMPANY HOLDINGS

Scale 1:17,500 @ A3

0m 175m 350m

Date OCTOBER 2014

Drawn by: GM

Checked by: DC

Revision: (-)

Job Ref:

Fig. 1.5

NORTH

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Legend

- Indicative DCO Boundary
- Development Plot Access only
- (OS) Open Space Soft Plot
- (OS) Open Space Hard Plot
- Sui Generis: amusement park, water park, car park, utilities
- D1 & D2: conference centre, exhibition hall, education
- B1: offices, research and development, light industry
- C1: hotels, resorts
- A1-A5: shops, shops, financial and professional services,restaurants and cafes, drinking establishments, hot food take away

Title

EIA SCOPING REPORT

INDICATIVE LAND USES PLAN

Client/Project

LONDON PARAMOUNT ENTERTAINMENT RESORT

LONDON RESORT COMPANY HOLDINGS

Scale 1:17,500 @ A3

0m 175m 350m

Date OCTOBER 2014

Drawn by: GM

Checked by:DC

Revision: (-)

Job Ref:

Fig. 1.6

NORTH

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Legend

- Indicative DCO Boundary
- Proposed Ebbsfleet Development Corporation boundary
- Northfleet Embankment & Swanscombe Peninsula East Opportunity Area
- Opportunity Area Key sites
- Ebbsfleet (Gravesham) Opportunity Area
- Opportunity Area Key sites
- Gravesend Town Centre Opportunity Area
- Ebbsfleet to Stone Priority Area
- Priority Area Key sites
- Thames Waterfront Priority Area
- Green Belt

Opportunity and Priority Areas are strategic regeneration sites designated by Dartford and Gravesham Core Strategies

Title

EIA SCOPING REPORT

# PLANNING DESIGNATIONS PLAN

Client/Project

LONDON PARAMOUNT ENTERTAINMENT RESORT

LONDON RESORT COMPANY HOLDINGS

Scale 1:17,500 @ A3

0m 175m 350m

Date OCTOBER 2014

Drawn by: GM

Checked by: DC

Revision: (-)

Job Ref:

Fig. 2.1

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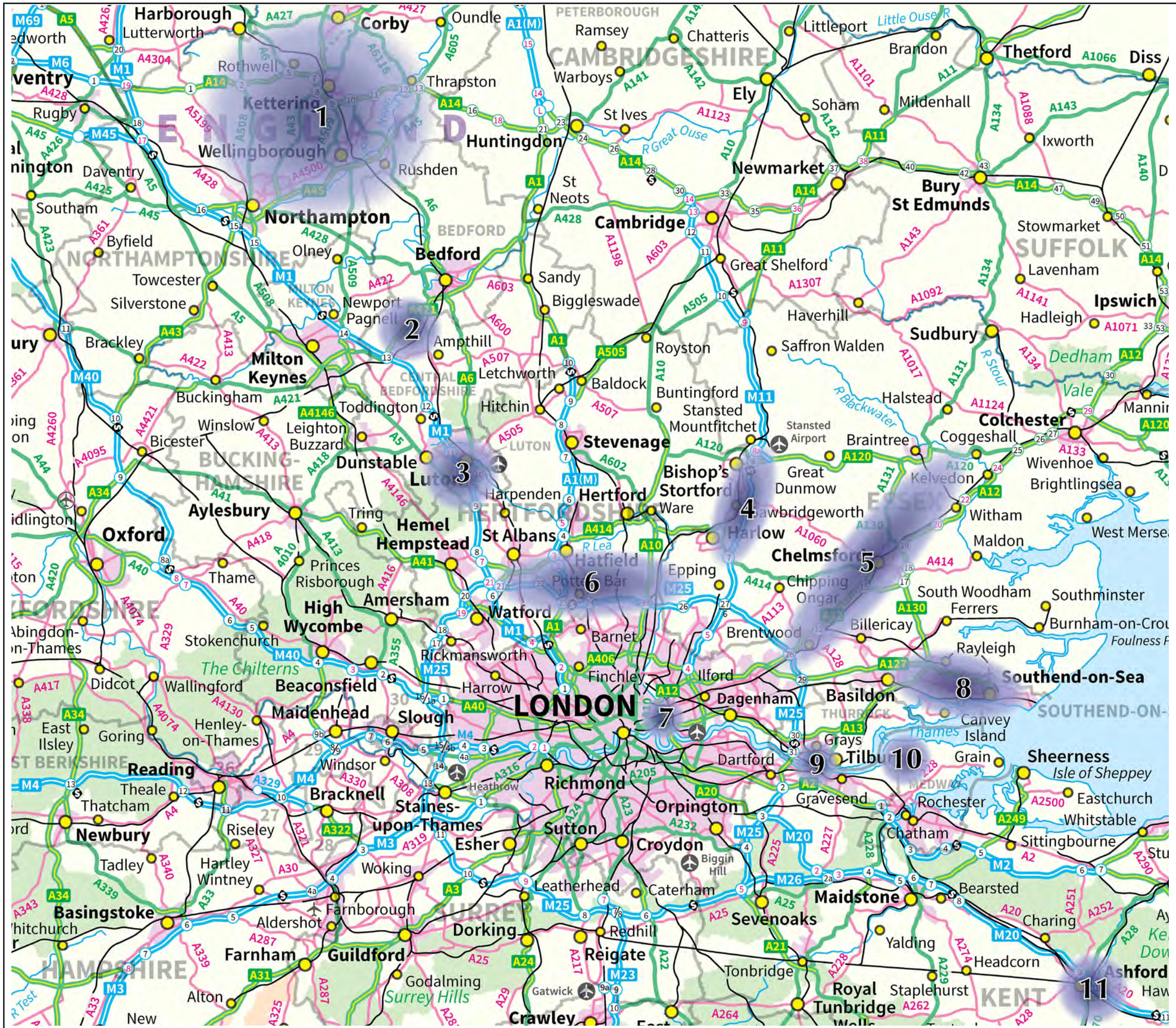


Legend

**AREAS OF SEARCH/POTENTIAL SITES**

1. **Northamptonshire**
   (Corby, Kettering, Wellingborough and Northampton)
2. **Marston Vale**
   2a - Hansons former brickworks, Stewartby
3. **Luton/Dunstable**
4. **M11 Corridor**
   (Stansted/Bishop's Stortford/Harlow)
5. **A12 Corridor**
   5a - Great Leighs Racecourse, North of Chelmsford
6. **M25 Corridor North**
   6a - Willows Farm Village (Jn 22, near St. Albans)
   6b - Gunpowder Park (Jn 26, near Waltham Abbey)
7. **Olympic Park Legacy Development Sites, London**
   7a - Stratford Waterfront
   7b - Olympic Quarter
   7c - Old Ford
   7d - Hackney Wick East
   7e - Stratford Village
   7f - Pudding Mill Lane
8. **Southend-on-Sea/Canvey Island, South Essex**
9. **Ebbsfleet Valley, North Kent**
   9a - Swanscombe Peninsula
   9b - Eastern Quarries
10. **Cliffe, North Kent**
11. **Ashford, Kent**

EIA Scoping Report - Site Location Options

Client/Project

London Paramount Entertainment Resort
London Resort Company Holdings

Scale 1:550,000 @ A3

0 5 10 Kilometres

Date 27/10/14

Drawn by: HS

Checked by: DW

Revision:

Job Ref:

Fig. 3.1

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Junction improvements works Phase 1

Junction improvements works Phase 1

Legend

- Indicative DCO Boundary
- Phase 1
- Future phases
- Phase 1 temporary

Title

EIA SCOPING REPORT

INDICATIVE STRATEGIC DEVELOPMENT PHASING PLAN

Client/Project

LONDON PARAMOUNT ENTERTAINMENT RESORT

LONDON RESORT COMPANY HOLDINGS

| | |
|---|---|
| Scale 1:17,500 @ A3 (0m 175m 350m) | Date OCTOBER 2014 |
| | Drawn by: GM |
| | Checked by: DC |
| Fig. 3.2 | Revision: (-) |
| | Job Ref: |

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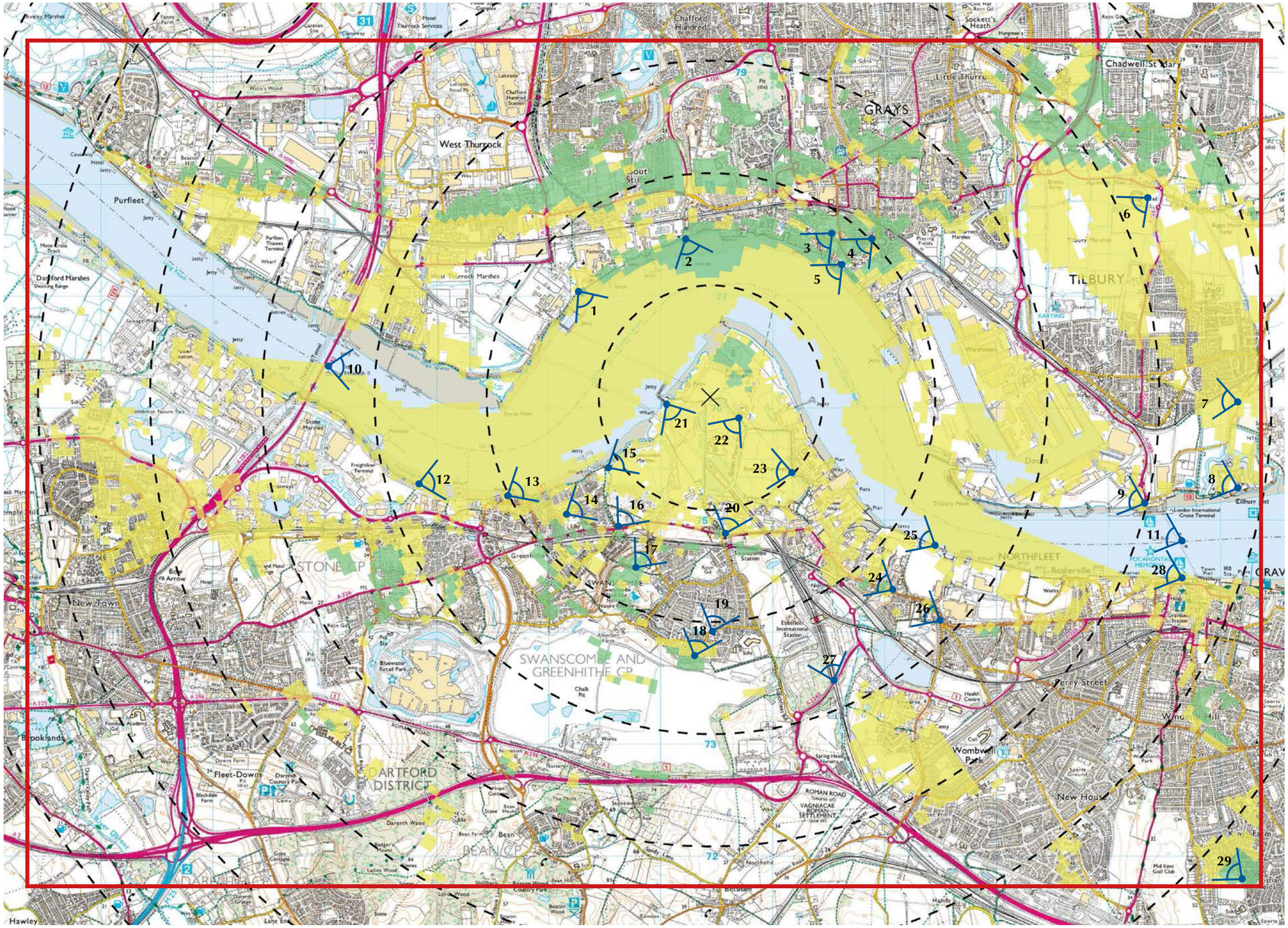


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0 1000m

Legend

**Study Area**

**Zone of Theoretical Visibility**

Entirely Visible

Partially Visible

1km Radii around highest point on Swanscombe Peninsula

**Potential Viewpoint**

1. West Thurrock Thames Path
2. South Stifford Thames Path
3. Grays High Rise Flats - West
4. Grays High Rise Flats - East
5. Grays Beach Riverside Park
6. Gateway Academy
7. West Tilbury Marshes
8. Tilbury Fort
9. London International Cruise Terminal
10. QEII M25 Thames Bridge Crossing
11. Gravesend/Tilbury Pedestrian Ferry
12. Stone/Charles Park (Thames Path)
13. Greenhithe Riverfront Thames Path
14. Ingress Abbey
15. Ingress Park
16. 1 Knockhall Road
17. Swanscombe Heritage Park
18. Swanscombe (Leonard Avenue)
19. St Peter & St Paul Church
20. All Saints Church
21. Swanscombe Peninsula Public Footpath
22. Swanscombe Peninsula Public Footpath
23. Swanscombe Peninsula Public Footpath
24. The Factory Club
25. Northfleet Lighthouse/Bevan's Memorial
26. Northfleet Conservation Area
27. A2260 HS1 Railway Bridge
28. Gravesend Riverfront
29. Gravesend (Kings Farm)

Title: EIA Scoping Report :
Landscape and Visual Effects -
Study Area and Potential Viewpoints

Client/ Project

London Paramount Entertainment Resort
London Resort Company Holdings

| | |
|---|---|
| Scale 1:25,000 @ A3 | Date 22/10/14 |
| | Drawn by: NE |
| Fig. 5.1 | Checked by: |
| | Revision: |
| | Job Ref: |

N

Legend

Indicative DCO boundary

# EIA Scoping Report
# Site Location Plan - Area

Client / Project:

London Paramount Entertainment Resort
London Resort Company Holdings

Scale: 1:100,000 @A3

0 2,300 m

07 November 2014

Drawn by: JV

Checked by: PL

Job Ref:

Fig. 1.2

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GREENHITHE

London Road

Greenhithe Station

Knockhall Road

St. Clements Way

Swanscombe Station

SWANSCOMBE

Stanhope Road

TILBURY

NORTHFLEET

Ebbsfleet International Station

GRAVESEND

Bluewater

Bean Junction (A296/B255)

Watling Street (A2)

Ebbsfleet Junction (A2/B259)

Legend

Indicative DCO Boundary

Title

EIA SCOPING REPORT

SITE LOCATION PLAN - LOCAL

Client/Project

LONDON PARAMOUNT ENTERTAINMENT RESORT

LONDON RESORT COMPANY HOLDINGS

Scale 1:25,000 @ A3

0m 250m 500m

Date OCTOBER 2014

Drawn by: GM

Checked by: DC

Revision: (-)

Job Ref:

Fig. 1.3

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TILBURY

GREENHITHE

London Road

Greenhithe Station

Knockhall Road

Swanscombe Station

NORTHFLEET

SWANSCOMBE

St Clements Way

Stanhope Road

Ebbsfleet International Station

GRAVESEND

Bluewater

Bean Junction (A296/B255)

Watling Street (A2)

Ebbsfleet Junction (A2/B259)

Legend

Indicative DCO Boundary

Title

EIA SCOPING REPORT

INDICATIVE DCO BOUNDARY AERIAL

Client/Project

LONDON PARAMOUNT ENTERTAINMENT RESORT

LONDON RESORT COMPANY HOLDINGS

Scale 1:17,500 @ A3

0m 175m 350m

Date OCTOBER 2014

Drawn by: GM

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Revision: (-)

Job Ref:

Fig. 1.4

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